

L0749: 4, L0750: 4, L0755: 4, H0663: 3, S0418: 3, H0619: 3, L0717: 3, H0013: 3, L0163: 3, H0553: 3, H0090: 3, L0763: 3, L0770: 3, L0766: 3, L0774: 3, L0664: 3, L0665: 3, H0519: 3, H0521: 3, L0742: 3, L0591: 3, S0276: 3, H0171: 2, H0341: 2, S0356: 2, S0360: 2, H0393: 2, S0300: 2, H0156: 2, H0150: 2, H0011: 2, H0687: 2, S0003: 2, H0328: 2, L0483: 2, H0634: 2, H0494: 2, H0560: 2, H0561: 2, H0646: 2, L0638: 2, L0646: 2, L0374: 2, L0764: 2, L0776: 2, L0655: 2, L0657: 2, H0520: 2, H0660: 2, H0134: 2, L0605: 2, L0593: 2, H0542: 2, S0024: 1, H0583: 1, S0116: 1, H0483: 1, S0420: 1, S0358: 1, S0408: 1,
--

H0580: 1, S0045: 1, H0440: 1, H0431: 1, T0104: 1, H0600: 1, H0632: 1, H0559: 1, H0485: 1, H0069: 1, S0280: 1, L0021: 1, H0042: 1, H0706: 1, H0505: 1, H0581: 1, H0421: 1, H0052: 1, L0471: 1, S0051: 1, H0266: 1, H0267: 1, S0316: 1, H0028: 1, H0252: 1, H0615: 1, H0644: 1, H0169: 1, H0598: 1, H0163: 1, H0038: 1, H0372: 1, H0412: 1, H0413: 1, H0623: 1, T0004: 1, S0372: 1, S0448: 1, S0440: 1, S0150: 1, S0344: 1, S0422: 1, L0598: 1, L0369: 1, L0520: 1, L0762: 1, L0761: 1, L0648: 1, L0521: 1, L0363: 1, L0649: 1, L0650: 1, L0523: 1, L0806: 1, L0653: 1, L0606: 1, L0661: 1, L0527: 1, L0809: 1, H0658: 1,
--

HOIJ58	HOIJ58R	1625	93 - 248	3800			H0672: 1, S0330: 1, S0152: 1, H0696: 1, S0406: 1, H0555: 1, H0478: 1, S0432: 1, L0786: 1, S0260: 1, H0445: 1, L0366: 1, S0026: 1, H0667: 1, H0423: 1, S0424: 1, S0446: 1 and H0008: 1.		
HOIJ60	HOIJ60R	1626	160 - 306	3801			H0648: 2, H0436: 2, L0748: 2, S0360: 1, L0766: 1, L0803: 1 and L0779: 1.		
HOIJ72	HOIJ72R	1627	77 - 265	3802					
HOIJ84	HOIJ84R	1628	78 - 290	3803					
HOIJ32	HOIJ32R	1629	1 - 237	3804					
HOIJ65	HOIJ65R	1630	2 - 340	3805	Ala-2 to Asp-10.				
HOIJ78	HOIJ78R	1631	318 - 560	3806			H0486: 1 and H0648: 1.		
HOIJ42	HOIJ42R	1632	317 - 463	3807			L0731: 2, H0483: 1, T0007: 1, T0039: 1, H0562: 1, L0769: 1, L0766: 1, H0670: 1, H0648: 1, L0756: 1, L0755: 1, L0758: 1, L0759: 1 and L0485: 1.		
HOIJ80	HOIJ80R	1633	106 - 267	3808	Arg-11 to Pro-22, Asn-42 to Lys-48.				
HOIJ17	HOIJ17R	1634	147 - 479	3809	Pro-8 to Phe-18.				

HO0JY41	HO0JY41R	1635	51 - 347	3810	Gln-1 to Cys-7, Asn-14 to Lys-22, Arg-29 to Leu-34, Glu-46 to Leu-54;				
HO0JY44	HO0JY44R	1636	2 - 184	3811					
HO0JY80	HO0JY80R	1637	1 - 462	3812	Ala-1 to Pro-6, Ala-22 to Glu-27, Glu-36 to Ser-45, Glu-62 to Gly-67, Gln-74 to Phe-83, Thr-90 to Ser-96, His-105 to Pro-116;				
HO0JY92	HO0JY92R	1638	3 - 437	3813		H0547: 16, H0090: 11, H0543: 10, H0542: 9, H0341: 8, L0471: 8, H0551: 8, S0358: 7, H0561: 7, S0126: 7, H0521: 7, H0657: 5, H0013: 5, S0440: 5, H0529: 5, H0144: 5, H0519: 5, H0265: 4, S0040: 4, H0264: 4, H0560: 4, H0520: 4, S0027: 4, L0731: 4, L0591: 4, L0592: 4, L0595: 4, H0423: 4, S0424: 4, H0170: 3, H0686: 3, H0638: 3, S0360: 3, S0410: 3, H0580: 3, H0486: 3,			

H0318: 3, H0510: 3, H0266: 3, H0553: 3, H0591: 3, H0040: 3, H0634: 3, S0150: 3, L0803: 3, L0657: 3, H0435: 3, S0152: 3, L0740: 3, L0747: 3, S0436: 3, L0588: 3, H0556: 2, S0116: 2, H0663: 2, S0356: 2, S0354: 2, S0376: 2, S0046: 2, H0393: 2, H0642: 2, H0574: 2, T0109: 2, H0635: 2, S0010: 2, T0110: 2, H0012: 2, H0083: 2, S0214: 2, H0038: 2, T0041: 2, T0042: 2, H0494: 2, H0647: 2, S0422: 2, S0002: 2, L0554: 2, H0660: 2, H0518: 2, S0406: 2, L0593: 2, H0667: 2, H0624: 1, H0171: 1, H0159: 1, S0114: 1, H0656: 1, H0484: 1, H0661: 1, H0664: 1, H0450: 1, S0442: 1, S0045: 1, H0619: 1, H0550: 1, S0222: 1,						
--	--	--	--	--	--	--

H0600: 1, H0586: 1, T0039: 1, T0040: 1, H0244: 1, H0069: 1, H0575: 1, H0004: 1, S0665: 1, H0581: 1, H0421: 1, S0049: 1, H0052: 1, T0115: 1, H0327: 1, H0572: 1, H0050: 1, H0620: 1, H0355: 1, S6028: 1, S0316: 1, H0290: 1, H0286: 1, H0615: 1, H0039: 1, H0622: 1, H0031: 1, H0316: 1, S0036: 1, H0616: 1, H0412: 1, H0056: 1, S0038: 1, S0112: 1, H0128: 1, H0429: 1, H0334: 1, H0625: 1, H0386: 1, H0509: 1, H0641: 1, H0633: 1, S0210: 1, S0426: 1, L0761: 1, L0800: 1, L0764: 1, L0773: 1, L0775: 1, L0663: 1, S0006: 1, S0148: 1, L0438: 1, H0593: 1, H0689: 1, H0670: 1, H0666: 1, H0648: 1, S0328: 1, S0330: 1,
--

							S0378: 1, H0696: 1, H0134: 1, H0555: 1, S0037: 1, S0206: 1, L0749: 1, S0031: 1, S0260: 1, H0445: 1, S0434: 1, L0599: 1, L0594: 1, H0422: 1 and S0456: 1.			
HOOKK83	HOOKK83R	1639	107 - 367	3814						
HOOKN43	HOOKN43R	1640	118 - 453	3815	Asp-1 to Lys-22.					
HOOKN71	HOOKN71R	1641	210 - 344	3816			H0657: 3, L0717: 2, H0421: 2, L0766: 2, L0666: 2, L0756: 2, L0759: 2, H0717: 1, H0587: 1, H0156: 1, L0021: 1, H0581: 1, H0014: 1, H0252: 1, S0422: 1, L0662: 1, L0794: 1, L0655: 1, L0809: 1, L0543: 1, L0791: 1, L0665: 1, H0658: 1, H0670: 1, H0648: 1, H0672: 1, H0696: 1, L0780: 1, S0434: 1 and H0506: 1.			
HOPJA09	HOPJA09R	1642	14 - 196	3817	Pro-20 to Gly-38.					
HOPJF95	HOPJF95R	1643	107 - 571	3818						
HOPJG60	HOPJG60R	1644	207 - 461	3819	Gly-69 to Glu-78.					
							L0775: 5, L0776: 5, L0747: 5, L0604: 5, L0769: 4, L0805: 4.			

HOP/G66	HOP/G66R	1645	2 - 136	3820	Pro-4 to Ser-29, Pro-31 to Ser-38.	L0777: 3, L0759: 3, L0774: 2, L0809: 2, L0758: 2, H0341: 1, H0484: 1, S0358: 1, S0444: 1, S0360: 1, S6026: 1, S0278: 1, H0156: 1, H0038: 1, H0616: 1, H0102: 1, L0770: 1, L0766: 1, L0804: 1, L0657: 1, L0789: 1, H0684: 1, H0696: 1, S0044: 1, L0756: 1 and L0780: 1. H0547: 41, L0751: 26, H0520: 18, S0344: 12, L0731: 11, T0006: 9, L0794: 9, L0753: 8, L0593: 8, S0278: 6, L0809: 6, H0135: 5, S0142: 5, L0800: 5, L0665: 5, L0743: 5, L0747: 5, H0024: 4, S0328: 4, L0759: 4, H0661: 3, H0594: 3, H0617: 3, L0657: 3, H0658: 3, H0666: 3, L0750: 3, L0752: 3, H0352: 3, H0664: 2, H0662: 2, H0041: 2, H0123: 2, H0081: 2,
---------	----------	------	---------	------	---------------------------------------	--

H0050: 2, H0099: 2, H0494: 2, S0002: 2, L0769: 2, L0806: 2, L0517: 2, L0382: 2, H0684: 2, H0660: 2, H0539: 2, S0152: 2, L0748: 2, L0587: 2, L0595: 2, H0294: 1, H0656: 1, H0484: 1, H0669: 1, H0208: 1, H0619: 1, H0586: 1, H0333: 1, H0427: 1, H0052: 1, H0251: 1, H0546: 1, H0545: 1, H0012: 1, H0688: 1, H0181: 1, H0606: 1, H0334: 1, H0646: 1, S0144: 1, S0426: 1, L0762: 1, L0640: 1, L0763: 1, L0637: 1, L0662: 1, L0386: 1, L0803: 1, L0804: 1, L0774: 1, L0378: 1, L0805: 1, L0629: 1, L0558: 1, L0659: 1, L0783: 1, L0791: 1, H0689: 1, H0648: 1, S0330: 1, S0332: 1, H0436: 1, H0540: 1, S0028: 1, L0744: 1,							
--	--	--	--	--	--	--	--

HOPIG79	HOPIG79R	1646	3 - 542	3821	Ala-83 to Arg-91, Tyr-99 to Tyr-105, Tyr-123 to Glu-128.	L0755: 1, L0757: 1, L0758: 1 and S0276: 1.		
HOPIG89	HOPIG89R	1647	166 - 597	3822	Gly-2 to Ala-13.			
HOPIH17	HOPIH17R	1648	321 - 464	3823				
HOPIH38	HOPIH38R	1649	148 - 285	3824		S0412: 22, L0662: 19, L0777: 14, S0010: 11, S0222: 9, S6028: 9, L0750: 9, T0010: 8, L0659: 8, L0747: 8, L0756: 8, L0663: 7, L0439: 7, H0051: 6, L0518: 6, L0754: 6, L0752: 6, S0280: 5, H0575: 5, S0358: 4, S0346: 4, L0753: 4, H0170: 3, H0662: 3, S0360: 3, H0427: 3, L0471: 3, H0373: 3, L0638: 3, L0637: 3, L0764: 3, L0774: 3, L0809: 3, L0666: 3, S0310: 3, H0672: 3, H0696: 3, L0731: 3, H0506: 3, H0713: 2, S0408: 2, H0411: 2, H0455: 2, H0574: 2, S0414: 2, H0486: 2.		

H0036: 2, S0049: 2, H0052: 2, H0327: 2, H0687: 2, H0428: 2, H0553: 2, H0644: 2, H0038: 2, L0520: 2, L0762: 2, L0770: 2, L0653: 2, L0517: 2, S0044: 2, L0442: 1, H0583: 1, L0443: 1, S0110: 1, S0282: 1, S0400: 1, H0661: 1, S0348: 1, S0356: 1, S0444: 1, H0329: 1, S0007: 1, H0619: 1, S6026: 1, S0300: 1, L0717: 1, S6022: 1, H0550: 1, H0592: 1, H0587: 1, H0599: 1, H0042: 1, H0590: 1, H0318: 1, H0309: 1, H0545: 1, H0563: 1, H0564: 1, H0123: 1, H0019: 1, S0050: 1, L0163: 1, S0388: 1, H0356: 1, H0328: 1, H0688: 1, H0039: 1, T0023: 1, H0031: 1, H0111: 1, H0169: 1, S0364: 1, L0455: 1, H0135: 1, H0163: 1,
--

						T0067: 1, T0069: 1, T0004: 1, H0100: 1, S0112: 1, L0370: 1, L0598: 1, L0769: 1, L0630: 1, L0800: 1, L0648: 1, L0363: 1, L0768: 1, L0649: 1, L0803: 1, L0775: 1, L0375: 1, L0651: 1, L0784: 1, L0523: 1, L0805: 1, L0776: 1, L0527: 1, L0657: 1, L0635: 1, L0783: 1, L0789: 1, L0532: 1, L0664: 1, H0691: 1, T0068: 1, S0148: 1, H0693: 1, H0520: 1, H0593: 1, H0689: 1, H0684: 1, S0330: 1, S0380: 1, S0174: 1, H0555: 1, L0612: 1, L0743: 1, L0748: 1, L0751: 1, L0749: 1, L0779: 1, L0759: 1, L0689: 1, S0434: 1, L0604: 1, L0366: 1, S0106: 1 and S0021: 1.		
HOPH65	HOPH65R	1650	6 - 497	3825	Ala-1 to Gly-11, Asn-20 to Pro-25.			
HOPIM63	HOPIM63R	1651	101 - 250	3826	Pro-20 to Glu-25.	S0010: 1, H0327: 1.		

HOP1U10	HOP1U10R	1652	78 - 269	3827	Lys-31 to Gly-36.	H0039: 1, H0622: 1, S0464: 1, L0803: 1, H0684: 1 and H0670: 1.		
					Phe-15 to Ser-22.	L0665: 7, L0747: 7, L0662: 6, L0766: 6, L0655: 5, L0659: 5, S0126: 5, L0717: 4, H0370: 4, L0763: 4, L0770: 4, L0646: 4, H0521: 4, L0748: 4, S0360: 3, H0009: 3, S0142: 3, S0344: 3, L0771: 3, L0774: 3, L0775: 3, L0663: 3, L0664: 3, L0740: 3, L0751: 3, L0750: 3, L0758: 3, L0601: 3, H0265: 2, H0657: 2, S0418: 2, S0420: 2, S0045: 2, T0039: 2, H0024: 2, T0010: 2, H0413: 2, S0144: 2, S0210: 2, L0667: 2, L0372: 2, L0642: 2, L0765: 2, L0653: 2, L0383: 2, L0666: 2, L0744: 2, L0439: 2, L0754: 2, L0756: 2, L0731: 2, L0599: 2, H0543: 2, L0615: 1.		

H0556: 1, H0295: 1, S0114: 1, H0656: 1, L0778: 1, S0282: 1, H0255: 1, H0661: 1, H0402: 1, S0354: 1, S0358: 1, S0376: 1, H0351: 1, S0222: 1, H0600: 1, H0586: 1, H0333: 1, H0250: 1, T0082: 1, H0318: 1, H0421: 1, H0052: 1, L0738: 1, H0327: 1, H0051: 1, H0083: 1, S0003: 1, S0022: 1, S0214: 1, H0092: 1, T0023: 1, L0483: 1, T0006: 1, H0030: 1, H0628: 1, H0181: 1, H0169: 1, H0090: 1, H0058: 1, L0351: 1, T0041: 1, H0494: 1, S0015: 1, L0065: 1, S0426: 1, L0640: 1, L0769: 1, L0772: 1, L0641: 1, L0374: 1, L0764: 1, L0773: 1, L0648: 1, L0626: 1, L0768: 1, L0649: 1, L0784: 1, L0378: 1, L0806: 1, L0776: 1,						
--	--	--	--	--	--	--

HOPIX48	HOPIX48R	1653	1 - 207	3828	Arg-5 to His-22, Ser-59 to Ala-69.	L0807: 1, L0657: 1, L0656: 1, L0783: 1, S0052: 1, S0428: 1, L0438: 1, H0547: 1, H0690: 1, H0682: 1, H0684: 1, H0670: 1, H0660: 1, H0672: 1, H0522: 1, H0187: 1, H0576: 1, S0027: 1, S0206: 1, L0743: 1, L0757: 1, L0605: 1, L0590: 1, L0591: 1, L0581: 1, L0595: 1, S0026: 1, H0665: 1, H0667: 1, H0542: 1, H0423: 1 and H0352: 1, H0445: 13, H0255: 11, L0666: 7, H0575: 5, H0059: 4, S0344: 4, L0655: 4, H0521: 4, H0522: 4, L0748: 4, L0751: 4, H0556: 3, S0278: 3, H0013: 3, H0181: 3, H0617: 3, S0142: 3, H0658: 3, H0660: 3, L0439: 3, H0423: 3, S0116: 2, H0341: 2, S0360: 2, H0580: 2, H0581: 2, H0014: 2, H0087: 2.
---------	----------	------	---------	------	---------------------------------------	---

L0663: 2, L0664: 2, L0665: 2, H0684: 2, L0741: 2, L0743: 2, H0170: 1, H0171: 1, H0265: 1, H0583: 1, H0657: 1, H0656: 1, L0470: 1, H0254: 1, H0664: 1, H0662: 1, S0420: 1, S0408: 1, H0393: 1, H0392: 1, H0613: 1, H0333: 1, L0622: 1, H0101: 1, H0250: 1, H0427: 1, L0021: 1, H0253: 1, S0346: 1, H0421: 1, H0596: 1, H0150: 1, H0620: 1, H0024: 1, H0428: 1, H0553: 1, H0169: 1, H0674: 1, S0366: 1, H0163: 1, H0040: 1, H0616: 1, H0063: 1, H0026: 1, H0517: 1, L0640: 1, L0770: 1, L0769: 1, L0761: 1, L0773: 1, L0559: 1, L0659: 1, L0790: 1, H0144: 1, H0593: 1, H0690: 1, H0709: 1, H0696: 1, H0187: 1, L0744: 1,						
--	--	--	--	--	--	--

HOP150	HOP150R	1654	273 - 395	3829			S0031: 1 and H0543: 1.		
HOP159	HOP159R	1655	2 - 163	3830		Pro-35 to Arg-48.			
HOPKA06	HOPKA06R	1656	2 - 676	3831		Arg-19 to Tyr-24, Asp-75 to Glu-87, Asn-102 to Cys-109, Ser-113 to Lys-118, Tyr-154 to Ser-169.	AR096: 4, AR089: 3, AR061: 1, AR055: 1, AR060: 1, AR104: 1 H0684: 2 and L0731: 1.		
HOPKC65	HOPKC63R	1657	26 - 232	3832		Leu-39 to Ser-51.			
HOPKD31	HOPKD31R	1658	3 - 191	3833		Ser-50 to Pro-57.			
HOPKG16	HOPKG16R	1659	1 - 456	3834		Asn-80 to Gly-86.			
HOPKG47	HOPKG47R	1660	1 - 579	3835		Pro-6 to Thr-34, Asp-57 to Gly-62, Gly-77 to Glu-83, Lys-108 to Asp-116, Met-145 to Arg-159.			
HOPKG83	HOPKG83R	1661	1 - 663	3836		Ser-72 to Ala-78, Asp-94 to Gly-100, Thr-104 to Asp-111, Ser-117 to Arg-133, Glu-138 to Lys-144, Lys-158 to Asp-165.			
HOPKK38	HOPKK38R	1662	3 - 455	3837		Ser-33 to Pro-42, Lys-53 to Cys-61.	H0494: 6, H0556: 5, H0265: 3, H0656: 3, H0618: 3, H0295: 2, H0255: 2, H0392: 2, H0575: 2, H0253: 2, H0052: 2, H0024: 2, H0617: 2, H0087: 2,		

L0565: 2, H0547: 2, H0521: 2, L0744: 2, L0439: 2, H0136: 2, H0543: 2, H0224: 1, H0225: 1, H0585: 1, S0114: 1, H0341: 1, H0484: 1, H0483: 1, H0671: 1, S0418: 1, S0354: 1, S0408: 1, S0007: 1, S0045: 1, H0261: 1, H0550: 1, H0586: 1, H0587: 1, H0497: 1, H0643: 1, H0257: 1, H0559: 1, H0485: 1, H0486: 1, S0346: 1, T0048: 1, T0071: 1, H0309: 1, H0041: 1, H0081: 1, H0050: 1, H0012: 1, H0620: 1, H0051: 1, S0388: 1, H0071: 1, H0083: 1, H0354: 1, H0594: 1, H0266: 1, H0179: 1, H0271: 1, H0292: 1, H0428: 1, H0424: 1, H0181: 1, H0135: 1, H0090: 1, H0063: 1, H0488: 1, H0433: 1, H0100: 1, T0041: 1, S0440: 1,							
--	--	--	--	--	--	--	--

						S0142: 1, H0538: 1, L0769: 1, L0764: 1, L0803: 1, L0809: 1, H0593: 1, H0683: 1, H0684: 1, H0435: 1, S0044: 1, L0747: 1, S0031: 1, H0445: 1, L0593: 1 and L0601: 1.			
HOPKN14	HOPKN14R	1663	2 - 460	3838		Gly-63 to Ala-69, Gly-104 to Leu-110, Gly-130 to Gly-136.			
HOPKN67 HOPKO04	HOPKN67R HOPKO04RA	1664 1665	22 - 483 170 - 319	3839 3840			L0803: 6, L0731: 4, S0440: 3, L0662: 3, L0809: 3, L0665: 3, S0276: 3, H0486: 2, H0318: 2, L0794: 2, L0805: 2, L0776: 2, L0663: 2, H0684: 2, L0740: 2, L0759: 2, L0592: 2, H0624: 1, L0448: 1, H0341: 1, S0282: 1, H0663: 1, S0360: 1, H0580: 1, L0468: 1, H0587: 1, H0427: 1, H0575: 1, S0010: 1, L0471: 1, H0644: 1, H0383: 1, H0169: 1, L0456: 1, H0090: 1, H0264: 1,		

							H0412: 1, H0561: 1, S0150: 1, S0002: 1, H0529: 1, L0638: 1, L5565: 1, L0372: 1, L0649: 1, L0388: 1, L0659: 1, L0783: 1, L0789: 1, L0791: 1, H0519: 1, S0380: 1, H0522: 1, H0436: 1, L0747: 1, L0752: 1, L0757: 1, L0599: 1, H0542: 1, H0543: 1 and H0422: 1.		
HOPK061	HOPK061R	1666	1 - 405	3841					
HOPKP45	HOPKP45R	1667	282 - 536	3842					
HOPKQ20	HOPKQ20R	1668	19 - 402	3843	Ser-19 to Arg-29, Asp-37 to Val-43, Ala-75 to Leu-80, Thr-96 to Arg-111.				
HOPKQ82	HOPKQ82R	1669	1 - 519	3844					
HOPKR56	HOPKR56R	1670	3 - 173	3845			L0439: 15, L0666: 8, S0222: 6, L0794: 5, L0638: 3, L0805: 3, L0664: 3, L0758: 3, L0592: 3, S0010: 2, L0770: 2, L0438: 2, H0624: 1, H0170: 1, S6024: 1, H0441: 1, S0414: 1, H0052: 1, H0572: 1, S6028: 1.		

HOPKU33	HOPKU33R	1671	2 - 274	3846			H0688: 1, H0616: 1, L0769: 1, L0768: 1, L0803: 1, L0774: 1, L0776: 1, L0659: 1, L0809: 1, L0789: 1, L0792: 1, H0519: 1, H0684: 1, L0745: 1, L0747: 1, L0756: 1, L0786: 1, L0753: 1, L0731: 1, L0759: 1 and L0366: 1.	
HOVBH23	HOVBH23R	1672	2 - 136	3847	Gly-1 to Val-7.		L0794: 16, L0809: 6, S0360: 4, H0617: 3, L0803: 3, S0114: 2, H0288: 2, H0688: 2, H0494: 2, L0375: 2, L0731: 2, L0588: 2, H0556: 1, S0134: 1, H0484: 1, S0420: 1, H10637: 1, H0441: 1, H0370: 1, H0438: 1, H0592: 1, T0109: 1, S0010: 1, H0150: 1, H0009: 1, H0081: 1, H0271: 1, H0428: 1, S0368: 1, H0424: 1, H0181: 1, H0124: 1, S0438: 1, S0440: 1,	
HOVBK37	HOVBK37R	1673	237 - 551	3848	Pro-7 to Trp-14.			

							S0144: 1, S0142: 1, S0344: 1, L0637: 1, L5566: 1, L0761: 1, L0764: 1, L0648: 1, L0662: 1, L0364: 1, L0766: 1, L5574: 1, L0805: 1, L0783: 1, L0647: 1, L0789: 1, L0665: 1, H0520: 1, H0547: 1, H0670: 1, H0660: 1, H0648: 1, S0380: 1, H0521: 1, H0555: 1, S3012: 1, L0748: 1, L0779: 1, L0780: 1, L0757: 1, L0759: 1 and H0352: 1.
HOVBK49	HOVBK49R	1674	3 - 86	3849	His-7 to Lys-20.		
HOVBS15	HOVBS15R	1675	144 - 404	3850	Glu-13 to Trp-32, Pro-34 to Asn-45.		
HOVBX41	HOVBX41R	1676	41 - 349	3851			
HOVCL23	HOVCL23R	1677	342 - 524	3852		S0360: 2, H0497: 2, H0333: 1, H0004: 1, H0428: 1, H0674: 1, S0422: 1, L0763: 1, L0803: 1, H0648: 1 and S0276: 1.	
HOVCN03	HOVCN03R	1678	2 - 127	3853	Gly-1 to Glu-7, Gly-29 to Ala-36.		
HOVCO26	HOVCO26R	1679	395 - 580	3854			
HOVCU89	HOVCU89R	1680	3 - 578	3855	Lys-63 to Ser-69.		

HOVCV33	HOVCV33R	1681	1 - 471	3856	Tyr-95 to His-102, Tyr-105 to Leu-111.	
HOVCW45	HOVCW45R	1682	2 - 226	3857	Ser-15 to Tyr-21, Gly-32 to Arg-37.	
						H0615: 2, L0748: 2, H0636: 1, S0007: 1, H0486: 1, H0041: 1, H0355: 1, S0250: 1, S0003: 1, H0688: 1, H0428: 1, H0622: 1, T0042: 1, L0768: 1, L0657: 1, L0526: 1, H0702: 1, L0565: 1, H0547: 1, H0519: 1, S0152: 1, S0390: 1, L0745: 1, L0749: 1, L0779: 1, L0588: 1, L0608: 1 and L0593: 1.
HOVCY68	HOVCY68R	1683	333 - 551	3858		
HOVCZ45	HOVCZ45R	1684	53 - 220	3859	Ilc-32 to Arg-37.	
HOVDB43	HOVDB43R	1685	110 - 289	3860		
HOVDB61	HOVDB61R	1686	34 - 204	3861		
HOVDB62	HOVDB62R	1687	1 - 270	3862		
HOVDB65	HOVDB65R	1688	37 - 498	3863		
HOVDD26	HOVDD26R	1689	24 - 257	3864		
HOVDE46	HOVDE46R	1690	253 - 393	3865	Asp-1 to Lys-6.	
HOVDG60	HOVDG60R	1691	92 - 184	3866		
HOVDG71	HOVDG71R	1692	74 - 154	3867		
HOVDH09	HOVDH09R	1693	3 - 365	3868	Pro-1 to Tyr-8.	

HOVDH75	HOVDH75R	1694	43 - 348	3869	Gln-14 to Gln-19, Arg-25 to Glu-37, Asn-44 to Arg-50, Glu-67 to Leu-75, Thr-105 to Gly-114.	L0794: 10, L0803: 7, L0747: 6, H0687: 5, H0597: 4, H0617: 4, L0764: 4, L0809: 4, L0758: 4, L0759: 4, L0800: 3, L0804: 3, L0775: 3, H0659: 3, H0543: 3, H0231: 2, L0471: 2, H0673: 2, H0674: 2, L0763: 2, L0770: 2, L0769: 2, L0768: 2, L0649: 2, L0375: 2, L0776: 2, H0638: 2, L0750: 2, L0779: 2, L0755: 2, L0731: 2, L0757: 2, L0596: 2, L0588: 2, S0026: 2, H0170: 1, H0483: 1, H0661: 1, H0402: 1, H0459: 1, S0360: 1, H0639: 1, L0717: 1, H0392: 1, H0607: 1, H0333: 1, H0486: 1, H0318: 1.
HOVDU91	HOVDU91R	1695	3 - 233	3870		

HOVDV70	HOVDV70R	1696	60 - 293	3871	Ile-12 to Gln-17.	H0251: 1, H0184: 1, H0045: 1, H0014: 1, S0388: 1, S0051: 1, H0594: 1, H0188: 1, H0687: 1, L0052: 1, H0328: 1, H0428: 1, H0181: 1, H0032: 1, H0090: 1, H0087: 1, H0413: 1, H0561: 1, S0372: 1, H0647: 1, S0144: 1, S0002: 1, H0026: 1, L0761: 1, L0627: 1, L0648: 1, L0766: 1, L0774: 1, L0805: 1, L0656: 1, L0659: 1, L0636: 1, L0383: 1, L0666: 1, L0663: 1, L0665: 1, S0428: 1, H0689: 1, H0670: 1, H0539: 1, S0013: 1, S0174: 1, L0751: 1, L0777: 1, L0752: 1, H0445: 1, L0608: 1, L0595: 1 and H0136: 1.		
HOVDV70	HOVDV70R	1696	60 - 293	3871	Ile-12 to Gln-17.	L0752: 3, L0731: 3, L0747: 2, L0753: 2, H0265: 1, S0116: 1, S0420: 1, H0428: 1, L0769: 1, L0767: 1,		

HOVDW60	HOVDW60R	1697	64 - 264	3872	Tyr-22 to Ala-28.	L0766: 1, L0775: 1, L0776: 1, H0555: 1, L0742: 1, L0748: 1, L0757: 1 and L0759: 1, H0428: 1 and S3014: 1, H0428: 2
HOVDZ66	HOVDZ66R	1698	99 - 257	3873	Gly-40 to His-48.	
HOVEA43	HOVEA43R	1699	247 - 396	3874		
HOVEB25	HOVEB25R	1700	169 - 363	3875	Ala-20 to Gln-25.	
HOVEE84	HOVEE84R	1701	410 - 589	3876	Ser-7 to Trp-13, Phe-19 to Ala-25.	
HOVEE92	HOVEE92R	1702	3 - 143	3877		S0474: 66, L0439: 16, H0547: 15, L0748: 15, L0731: 10, S0360: 9, L0770: 9, S0408: 8, S0358: 7, L0771: 7, L0775: 7, L0747: 6, L0592: 6, H0428: 5, S0438: 5, L0659: 5, L0664: 5, L0665: 5, L0752: 5, L0757: 5, H0506: 5, S0007: 4, H0549: 4, S0440: 4, L0769: 4, L0768: 4, L0774: 4, L0663: 4, H0519: 4, S0152: 4, L0750: 4, L0779: 4, L0755: 4, L0759: 4, L0591: 4, L0595: 4, S0444: 3, H0510: 3, H0615: 3, H0551: 3.

H0100: 3, L0598: 3, L0638: 3, L0766: 3, S0380: 3, L0594: 3, H0341: 2, S0420: 2, S0442: 2, H0722: 2, L0717: 2, H0550: 2, S0222: 2, H0587: 2, H0574: 2, H0632: 2, H0013: 2, H0575: 2, H0581: 2, H0544: 2, H0012: 2, H0687: 2, H0628: 2, S0036: 2, H0509: 2, L0637: 2, L0764: 2, L0773: 2, L0803: 2, L0375: 2, L0806: 2, L0783: 2, L0656: 2, H0520: 2, H0684: 2, H0659: 2, H0521: 2, L0745: 2, L0756: 2, S0436: 2, L0596: 2, L0593: 2, L0362: 2, S0194: 2, H0543: 2, H0624: 1, H0170: 1, H0171: 1, H0717: 1, H0657: 1, H0671: 1, H0663: 1, H0664: 1, H0459: 1, S0356: 1, S0410: 1, H0637: 1, S0476: 1, H0645: 1, S6026: 1,				
--	--	--	--	--

S0300: 1, H0369: 1, H0431: 1, H0586: 1, H0497: 1, H0331: 1, L0021: 1, S0049: 1, H0184: 1, L0738: 1, H0545: 1, H0046: 1, H0563: 1, H0123: 1, H0050: 1, L0471: 1, H0620: 1, H0014: 1, S0388: 1, S0051: 1, H0356: 1, H0266: 1, S0003: 1, H0039: 1, H0622: 1, T0006: 1, H0617: 1, S0366: 1, H0090: 1, H0040: 1, H0616: 1, S0038: 1, T0041: 1, H0494: 1, S0014: 1, S0150: 1, L0369: 1, L0640: 1, L0763: 1, L5565: 1, L0761: 1, L0373: 1, L0372: 1, L0646: 1, L0521: 1, L0662: 1, L0804: 1, L0651: 1, L0652: 1, L0776: 1, L0527: 1, L0657: 1, L0526: 1, L0384: 1, L0809: 1, L0545: 1, L0790: 1, L0792: 1, H0144: 1, L0438: 1,
--

HOVEF34 HOVEF81	HOVEF34R HOVEF81R	1703 1704	288 - 497 1 - 393	3878 3879	Gln-4 to Gln-10, Lys-35 to Ala-60, Pro-66 to Ser-79.	HO593: 1, S0126: 1, HO682: 1, HO660: 1, HO648: 1, S0328: 1, HO539: 1, S0378: 1, S0350: 1, HO696: 1, S0028: 1, S0206: 1, L0740: 1, L0777: 1, L0758: 1, S0434: 1, HO217: 1, S0192: 1, S0412: 1 and S0456: 1.		
						L0750: 11, L0740: 7, L0747: 5, HO341: 4, L0757: 4, HO641: 3, L0766: 3, L0748: 3, L0754: 3, L0752: 3, LO593: 3, HO171: 2, S0134: 2, S0442: 2, S0010: 2, HO428: 2, HO538: 2, L0770: 2, L0774: 2, L0776: 2, LO517: 2, LO438: 2, HO519: 2, HO684: 2, L0777: 2, L0755: 2, L0731: 2, L0758: 2, S0026: 2, HO170: 1, T0002: 1, S0114: 1, S0116: 1, HO663: 1, S0358: 1, S0360: 1, S0007: 1, S0046: 1.		

HOVEG73	HOVEG73R	1705	3 - 290	3880	Ser-9 to Gly-17, Ser-20 to Pro-26, Arg-32 to His-41.	H0411: 1, H0592: 1, H0486: 1, H0013: 1, L0022: 1, H0575: 1, H0581: 1, H0052: 1, H0251: 1, H0012: 1, H0620: 1, H0594: 1, H0398: 1, S0036: 1, H0090: 1, H0038: 1, H0040: 1, H0087: 1, L0475: 1, L0520: 1, L0630: 1, L0521: 1, L0662: 1, L0522: 1, L0803: 1, L0651: 1, L0652: 1, L0655: 1, L0661: 1, L0783: 1, L0809: 1, L0789: 1, L0666: 1, H0689: 1, H0682: 1, H0659: 1, H0670: 1, S0330: 1, H0539: 1, H0436: 1, L0605: 1, L0366: 1, S0276: 1, H0542: 1 and H0423: 1.		
HOVEI15	HOVEI15R	1706	160 - 468	3881		L0809: 8, L0794: 5, L0439: 5, L0758: 5, H0617: 4, L0438: 4, L0754: 4, L0731: 4,		

HOVEL51	HOVEL51R	1707	60 - 209	3882	Ser-13 to Val-21, Thr-45 to Ser-50.	H0295: 3, L0776: 3, H0619: 2, H0441: 2, H0253: 2, H0545: 2, H0188: 2, H0687: 2, H0428: 2, H0424: 2, H0213: 2, H0031: 2, L0769: 2, L0803: 2, L0792: 2, H0539: 2, L0748: 2, L0745: 2, L0747: 2, L0757: 2, H0717: 1, H0549: 1, S0222: 1, H0333: 1, H0318: 1, S0049: 1, L0738: 1, H0046: 1, H0024: 1, H0090: 1, H0649: 1, S0142: 1, L0763: 1, L0642: 1, L0764: 1, L0771: 1, L0649: 1, L0651: 1, L0632: 1, L0805: 1, L0790: 1, H0144: 1, H0723: 1, H0682: 1, H0696: 1, H0555: 1, S0028: 1, L0742: 1, L0744: 1 and L0752: 1.		
HOVEN79	HOVEN79R	1708	146 - 265	3883				
HOVEN86	HOVEN86R	1709	1 - 168	3884				
HOVEP45	HOVEP45R	1710	1 - 102	3885				

HOVEW80	HOVEW80R	1711	2 - 244	3886	Lys-5 to Ser-18.	L0803: 7, L0748: 4, L0439: 4, L0804: 3, L0750: 3, L0756: 3, H0024: 2, L0438: 2, L0747: 2, L0779: 2, H0624: 1, H0171: 1, H0661: 1, S0354: 1, H0208: 1, S0300: 1, H0441: 1, H0331: 1, H0013: 1, S0214: 1, H0428: 1, H0040: 1, L0770: 1, L0776: 1, L0809: 1, L0665: 1, H0547: 1, H0658: 1, S0432: 1, L0749: 1, L0777: 1, L0780: 1, L0755: 1 and L0759: 1.		
HOVEY58	HOVEY58R	1712	175 - 405	3887				
HOVED79	HOVED79R	1713	3 - 152	3888	Val-2 to Ser-7.			
HOVJF86	HOVJF86RA	1714	20 - 130	3889				
HOVJH27	HOVJH27RA	1715	2 - 355	3890				
HOVJI53	HOVJI53R	1716	1 - 396	3891				
HOVJ009	HOVJ009R	1717	1 - 576	3892	Ser-5 to Gly-10, Glu-18 to Glu-32, Ala-39 to Lys-46, Ser-89 to Arg-96, Pro-141 to Ala-151, Ser-162 to Gln-169.			
HOVJR56	HOVJR56R	1718	1 - 186	3893	Ala-18 to Ser-24, Gly-55 to Thr-60.			

HOVJU75	HOVJU75R	1719	49 - 684	3894	Tyr-44 to Asp-49, Pro-132 to Leu-139, Cys-168 to His-174.		
HOVJW17	HOVJW17R	1720	74 - 301	3895	Ala-8 to Gln-14, Arg-40 to Glu-45.		
HOVJY68	HOVJY68R	1721	199 - 570	3896	Pro-47 to Lys-53, Leu-93 to Lys-102, Tyr-105 to Gln-110, Arg-115 to Lys-124.		
HOVKB02	HOVKB02R	1722	1 - 366	3897	Ala-1 to His-13, Leu-73 to Leu-79. L0157: 2, H0620: 2, L0666: 2, S0001: 1, L0717: 1, H0549: 1, S0222: 1, H0581: 1, H0194: 1, H0015: 1, H0399: 1, H0271: 1, H0688: 1, H0428: 1, H0124: 1, L0637: 1, H0672: 1, L0439: 1, L0750: 1 and H0423: 1.		
HOVKE66	HOVKE66R	1723	2 - 487	3898	Ala-20 to Val-38, Cys-43 to Thr-60, Arg-91 to Lys-97.		
HOVKF20	HOVKF20R	1724	1 - 168	3899	Gln-15 to Leu-20, Pro-37 to Thr-44.		
HOVKG18	HOVKG18R	1725	2 - 406	3900	Cys-23 to His-29, Ser-74 to Glu-91.		
HPAMB11	HPAMB11R	1726	323 - 511	3901	Gln-8 to Tyr-14, Pro-20 to Thr-26.		
HPAMB60	HPAMB60R	1727	2 - 586	3902			

HPAMB62	HPAMB62R	1728	2 - 196	3903	Len-12 to Ser-21.	L0439: 11, L0747: 8, H0624: 6, L0759: 6, L0779: 5, L0758: 5, H0013: 4, L0803: 4, L0754: 4, H0171: 3, L0666: 3, L0756: 3, L0752: 3, L0755: 3, L0591: 3, L0608: 3, H0170: 2, H0650: 2, H0341: 2, H0663: 2, S0360: 2, S0003: 2, L0769: 2, L0796: 2, L0766: 2, L0649: 2, L0806: 2, H0696: 2, S0028: 2, L0740: 2, L0750: 2, L0777: 2, S0436: 2, L0361: 2, S0298: 1, S0418: 1, S0444: 1, S0408: 1, H0733: 1, H0734: 1, S0300: 1, S0220: 1, H0497: 1, H0333: 1, H0270: 1, H0575: 1, H0036: 1, H0590: 1, H0596: 1, H0050: 1, L0471: 1, H0015: 1, S0388: 1, S6028: 1, H0266: 1, H0328: 1, H0622: 1, H0708: 1, H0591: 1, H0040: 1,		
---------	----------	------	---------	------	-------------------	---	--	--

HPAMB93	HPAMB93R	I729	2 - 439	3904				H0087: 1, H0412: 1, H0039: 1, S0112: 1, H0625: 1, S0440: 1, S0150: 1, S0422: 1, L0598: 1, H0529: 1, L0770: 1, L0761: 1, L0646: 1, L0764: 1, L0662: 1, L0768: 1, L0794: 1, L0630: 1, L0774: 1, L0775: 1, L0375: 1, L0659: 1, L0809: 1, L0530: 1, L0664: 1, L0665: 1, S0053: 1, L0438: 1, H0547: 1, H0519: 1, H0682: 1, H0659: 1, H0638: 1, H0660: 1, H0539: 1, S0152: 1, S0044: 1, L0749: 1, L0757: 1, H0443: 1, S0394: 1, L0596: 1, L0594: 1, S0026: 1, S0276: 1, H0543: 1, H0423: 1, S0412: 1 and H0293: 1.
HPAMC04	HPAMC04R	I730	134 - 334	3905				
HPAMC19	HPAMC19R	I731	8 - 631	3906				
HPAMC27	HPAMC27R	I732	1 - 669	3907				
HPAMC90	HPAMC90R	I733	18 - 464	3908	Arg-1 to Giv-6,	S0360: 15, S0358: 14,		

Pro-13 to Thr-20.	L0794: 12, L0747: 12, H0696: 11, H0341: 10, H0670: 10, H0657: 9, S0422: 9, H0659: 8, S0114: 7, H0656: 7, S0408: 7, S0007: 7, H0486: 7, H0543: 7, S0444: 6, L0471: 6, S0126: 6, H0658: 6, S0378: 6, S0406: 6, S0027: 6, H0038: 5, H0040: 5, L0770: 5, L0517: 5, H0648: 5, S0404: 5, L0752: 5, H0423: 5, H0624: 4, H0171: 4, H0716: 4, S0116: 4, S0410: 4, H0545: 4, H0373: 4, H0674: 4, L0520: 4, L0763: 4, L0662: 4, L0775: 4, L0493: 4, L0518: 4, L0809: 4, L0519: 4, S3012: 4, H0445: 4, L0361: 4, H0685: 3, T0049: 3, S0420: 3, H0580: 3, S0132: 3, T0109: 3, H0013: 3, S0346: 3, H0597: 3, H0615: 3, H0616: 3, H0087: 3.
-------------------	---

S0390: 2, S0032: 2, L0742: 2, L0750: 2, L0588: 2, L0603: 2, S0026: 2, H0170: 1, H0395: 1, H0713: 1, S0402: 1, S6024: 1, H0295: 1, H0294: 1, S0218: 1, S0110: 1, H0402: 1, H0305: 1, S0418: 1, H0722: 1, H0728: 1, S0046: 1, S0476: 1, S0300: 1, H0462: 1, S0222: 1, H0385: 1, H0370: 1, H0404: 1, H0592: 1, H0497: 1, H0333: 1, L0623: 1, L0586: 1, T0060: 1, H0098: 1, H0318: 1, L0563: 1, H0581: 1, H0421: 1, H0251: 1, H0309: 1, H0596: 1, H0231: 1, H0150: 1, H0123: 1, H0620: 1, L0163: 1, S0051: 1, H0399: 1, H0354: 1, H0266: 1, S0334: 1, S0312: 1, S0214: 1, H0428: 1, L0483: 1, T0006: 1, H0553: 1, H0606: 1,							
--	--	--	--	--	--	--	--

H0212: 1, H0124: 1, H0090: 1, H0059: 1, T0004: 1, T0041: 1, H0560: 1, H0625: 1, H0561: 1, H0366: 1, H0509: 1, H0633: 1, S0472: 1, H0647: 1, H0646: 1, H0649: 1, S0142: 1, H0529: 1, L0451: 1, L0625: 1, L0640: 1, L0501: 1, L3904: 1, L0771: 1, L0560: 1, L5569: 1, L5574: 1, L5564: 1, L0499: 1, L0651: 1, L0555: 1, L0514: 1, L0783: 1, L0529: 1, L0791: 1, L0664: 1, S0374: 1, H0691: 1, H0684: 1, H0435: 1, H0660: 1, H0666: 1, H0539: 1, H0524: 1, H0704: 1, S0044: 1, S0146: 1, H0134: 1, H0436: 1, S0392: 1, S3014: 1, L0753: 1, L0755: 1, L0759: 1, S0031: 1, S0260: 1, H0444: 1, H0595: 1, L0599: 1, L0608: 1,
--

HPAMD56	HPAMD56R	1734	1 - 504	3909	Glu-10 to Phe-17, Phe-25 to Leu-32, Thr-38 to Tyr-44, Gln-81 to Thr-88.	H0653: 1, S0242: 1, S0194: 1, S0196: 1, H0542: 1, H0506: 1 and H0352: 1.		
HPAME35	HPAME35R	1735	2 - 277	3910	Gly-60 to Phe-66.	L0731: 9, L0653: 8, L0757: 6, L0809: 5, L0747: 5, S0418: 4, S0360: 4, H0188: 4, S0404: 4, L0779: 4, S0040: 3, H0370: 3, H0040: 3, L0774: 3, S0434: 3, S0442: 2, H0575: 2, H0252: 2, S0440: 2, L0374: 2, L0773: 2, H0435: 2, S0406: 2, L0748: 2, L0740: 2, L0754: 2, L0746: 2, L0758: 2, L0581: 2, H0624: 1, H0686: 1, S0180: 1, H0661: 1, S0358: 1, S0476: 1, L0717: 1, H0549: 1, H0455: 1, H0586: 1, H0632: 1, S0280: 1, H0599: 1, H0118: 1, H0235: 1,		

									H0597: 1, H0545: 1, T0003: 1, H0510: 1, S0314: 1, H0039: 1, L0194: 1, T0086: 1, H0606: 1, H0032: 1, H0674: 1, H0708: 1, H0598: 1, H0634: 1, H0379: 1, H0413: 1, H0100: 1, S0464: 1, H0509: 1, S0344: 1, L0763: 1, L4497: 1, L0639: 1, L0764: 1, L0771: 1, L0364: 1, L0775: 1, L0806: 1, L0655: 1, L0807: 1, L0657: 1, L0788: 1, L0664: 1, L0665: 1, S0374: 1, H0693: 1, S0126: 1, H0689: 1, H0690: 1, H0682: 1, H0670: 1, H0660: 1, H0672: 1, S0330: 1, S0152: 1, S0390: 1, L0744: 1, L0750: 1, L0780: 1, L0753: 1, H0665: 1, H0667: 1 and S0196: 1.				
HPAMF58	HPAMF58R	1736	184 - 492	3911			Lys-1 to Leu-12.	H0663: 1, L0438: 1 and H0682: 1.					
HPAMF16	HPAMF16R	1737	19 - 513	3912			Glu-1 to Gly-8.						

HPAMF38	HPAMF38R	1738	24 - 449	3913	Ser-35 to Gly-41, Ser-71 to Met-80.	L0752: 12, L0748: 8, L0766: 5, L0599: 5, H0617: 4, L0764: 4, H0081: 3, L0774: 3, L0806: 3, L0776: 3, L0749: 3, L0750: 3, S0444: 2, S0408: 2, H0392: 2, H0150: 2, H0494: 2, H0521: 2, L0756: 2, L0758: 2, H0506: 2, H0352: 2, H0265: 1, H0483: 1, S0358: 1, L0021: 1, H0108: 1, H0024: 1, H0083: 1, S0366: 1, H0090: 1, H0038: 1, H0040: 1, T0041: 1, L0763: 1, L0770: 1, L3905: 1, L0772: 1, L0644: 1, L0645: 1, L0771: 1, L0775: 1, L0651: 1, L0378: 1, L0659: 1, L0666: 1, L0665: 1, L0438: 1, H0519: 1, H0682: 1, H0670: 1, S0188: 1, L0740: 1, L0747: 1, L0777: 1, L0759: 1, H0445: 1, L0596: 1, L0604: 1 and H0542: 1.
---------	----------	------	----------	------	--	--

HPAMG44	HPAMG44R	1739	385 - 666	3914						
HPAMG54	HPAMG54R	1740	3 - 410	3915						
HPAMI11	HPAMI11R	1741	2 - 670	3916		Lys-13 to Tyr-30, Arg-52 to Lys-57, Ser-72 to Thr-79, Thr-110 to Trp-115, Leu-124 to Ala-130, Leu-132 to Glu-138, Asn-141 to Lys-162.				
HPAMI71	HPAMI71R	1742	2 - 472	3917						
HPAMQ47	HPAMQ47R	1743	100 - 246	3918				L0777: 5, L0766: 3, L0803: 3, L0439: 3, S0360: 2, L0598: 2, L0666: 2, L0748: 2, T0049: 1, S0134: 1, S0116: 1, L0717: 1, H0586: 1, H0486: 1, H0575: 1, H0510: 1, H0553: 1, H0560: 1, S0422: 1, L0763: 1, L0769: 1, L0521: 1, L0767: 1, L0768: 1, L0775: 1, L0663: 1, S0374: 1, L0438: 1, H0520: 1, H0682: 1, S0328: 1, L0740: 1, L0757: 1, S0192: 1 and H0543: 1.		
HPAMQ76	HPAMQ76R	1744	2 - 190	3919						
HPAMT47	HPAMT47R	1745	327 - 509	3920	Pro-18 to Lys-24. Thr-27 to Lys-37.			S0358: 8, L0777: 6,		

L0744: 4, H0656: 3, L0766: 3, H0659: 3, H0436: 3, L0754: 3, L0747: 3, L0731: 3, S0026: 3, H0254: 2, S0007: 2, H0587: 2, L0586: 2, H0545: 2, H0150: 2, L0794: 2, H0144: 2, L0750: 2, L0608: 2, S0412: 2, H0170: 1, H0638: 1, S0420: 1, S0442: 1, S0444: 1, H0329: 1, S0045: 1, H0645: 1, H0586: 1, H0333: 1, H0574: 1, H0013: 1, H0250: 1, L0105: 1, H0581: 1, H0196: 1, H0263: 1, H0546: 1, H0457: 1, L0157: 1, L0471: 1, S0051: 1, S0336: 1, S0214: 1, H0428: 1, H0032: 1, H0166: 1, H0673: 1, H0561: 1, S0440: 1, L0763: 1, L0764: 1, L0803: 1, L0804: 1, L0776: 1, T0068: 1, H0547: 1, H0519: 1, H0593: 1, H0690: 1,
--

							H0682: 1, H0435: 1, H0670: 1, H0666: 1, H0672: 1, S0328: 1, H0696: 1, L0751: 1, L0749: 1, L0756: 1, L0780: 1, L0757: 1, L0759: 1, H0543: 1, H0423: 1 and H0422: 1.			
HPAMU33	HPAMU33R	1746	2 - 520	3921	Lys-59 to Tyr-70, Pro-109 to Lys-115.					
HPAMV82	HPAMV82R	1747	207 - 422	3922	Gln-34 to Asn-39.					
HPAMW44	HPAMW44R	1748	1 - 357	3923	Gly-1 to Arg-13, Glu-37 to Lys-42, Gly-45 to Gln-64.					
							L0742: 11, L0747: 10, L0769: 9, L0766: 9, L0754: 8, L0751: 7, L0777: 7, L0752: 7, L0806: 6, L0776: 6, L0743: 6, L0717: 4, L0665: 4, L0750: 4, S0360: 3, H0580: 3, H0318: 3, H0052: 3, L0471: 3, H0040: 3, T0042: 3, H0547: 3, H0682: 3, L0745: 3, L0779: 3, L0759: 3, L0593: 3, L0601: 3, H0624: 2, H0556: 2, S0045: 2, H0559: 2, H0013: 2, H0530: 2, H0046: 2, H0620: 2, S0051: 2, T0010: 2.			

H0083: 2, S0002: 2, L0770: 2, L0659: 2, H0520: 2, S0292: 2, L0744: 2, L0740: 2, L0758: 2, L0596: 2, T0049: 1, L0393: 1, S0001: 1, H0663: 1, H0306: 1, H0638: 1, S0420: 1, S0358: 1, S0132: 1, H0619: 1, H0645: 1, H0550: 1, S0222: 1, H0392: 1, H0438: 1, H0257: 1, T0039: 1, T0040: 1, S0280: 1, H0156: 1, H0575: 1, H0618: 1, H0253: 1, S0010: 1, H0581: 1, H0194: 1, H0204: 1, H0150: 1, H0123: 1, H0292: 1, L0194: 1, T0023: 1, H0031: 1, H0553: 1, H0617: 1, H0673: 1, H0169: 1, H0674: 1, H0090: 1, H0269: 1, H0623: 1, H0494: 1, L0475: 1, S0150: 1, H0538: 1, L0763: 1, L0638: 1, L0761: 1, L0646: 1, L0645: 1,							
--	--	--	--	--	--	--	--

HPAMY45	HPAMY45R	1749	291 - 569	3924	Pro-1 to Cys-6, Ala-13 to Ala-19, His-22 to Lys-28, Ser-44 to Cys-53, Pro-56 to Gly-67.	L0771: 1, L0803: 1, L0774: 1, L0775: 1, L0651: 1, L0657: 1, L0658: 1, L0545: 1, L0792: 1, L0663: 1, L0664: 1, H0144: 1, H0593: 1, S0126: 1, H0435: 1, S0330: 1, H0521: 1, H0522: 1, S0044: 1, S0406: 1, S0027: 1, L0741: 1, L0439: 1, L0755: 1, L0757: 1, S0436: 1, L0485: 1, L0603: 1, S0011: 1, H0668: 1, H0542: 1 and H0422: 1.		
HPAMZ14	HPAMZ14R	1750	2 - 628	3925	Trp-19 to Ser-27, Pro-185 to Ser-195.	L0493: 91, L0515: 29, L0509: 25, L0514: 21, L0803: 12, L0508: 8, L0604: 7, H0599: 6, L0809: 5, H0445: 5, L0800: 4, L0511: 4, L0362: 4, H0543: 4,		
HPAMZ15	HPAMZ15R	1751	3 - 149	3926				

H0657: 3, L0598: 3, L0498: 3, L0805: 3, L0780: 3, L0755: 3, L0731: 3, L0759: 3, L0591: 3, S0026: 3, H0170: 2, H0373: 2, H0038: 2, H0623: 2, H0494: 2, H0560: 2, H0561: 2, L0503: 2, L0651: 2, L0653: 2, L0776: 2, L0792: 2, H0520: 2, H0555: 2, S0206: 2, L0748: 2, L0749: 2, L0756: 2, L0779: 2, L0590: 2, L0608: 2, H0658: 2, H0422: 2, S0040: 1, S0114: 1, S0134: 1, S0218: 1, H0656: 1, S0212: 1, S0360: 1, H0489: 1, H0580: 1, S0045: 1, S0476: 1, H0431: 1, H0643: 1, L0623: 1, H0486: 1, H0069: 1, H0002: 1, H0097: 1, H0274: 1, S0474: 1, H0421: 1, L0040: 1, H0024: 1, S0003: 1, H0622: 1, H0553: 1, H0032: 1,
--

HPAMZ81	HPAMZ81R	1752	3 - 677	3927	Ser-1 to Lys-25, Glu-71 to Ser-77, Glu-93 to Thr-99,	H0388: 1, H0400: 1, S0036: 1, H0090: 1, H0551: 1, H0264: 1, H0412: 1, S0386: 1, T0042: 1, H0625: 1, S0210: 1, H0529: 1, L0625: 1, L0505: 1, L0506: 1, L0500: 1, L0761: 1, L0646: 1, L0662: 1, L0794: 1, L0375: 1, L0784: 1, L0655: 1, L0510: 1, L0634: 1, L0517: 1, L0519: 1, L0793: 1, L0666: 1, L0664: 1, S0374: 1, H0547: 1, H0519: 1, H0682: 1, H0658: 1, H0648: 1, H0672: 1, H0539: 1, H0521: 1, H0696: 1, S0146: 1, S0390: 1, L0747: 1, L0753: 1, S0260: 1, H0444: 1, S0434: 1, L0584: 1, S0242: 1, S0194: 1, S0276: 1, H0542: 1 and S0424: 1.		
---------	----------	------	---------	------	--	--	--	--

HPANA05	HPANA05R	1753	2 - 514	3928	Arg-123 to His-134, Pro-141 to His-146, His-198 to Ala-207. Thr-23 to Gln-35, His-37 to Val-51, Arg-70 to Arg-81, Gln-108 to Asp-114, Met-130 to Ser-140.			
HPANA07	HPANA07R	1754	1 - 720	3929	Ala-1 to Thr-6, Lys-19 to Leu-24, Ile-77 to Ala-93, Val-105 to Leu-110, Thr-139 to Thr-153, Thr-165 to Lys-187, Ala-198 to Leu-203, Ser-211 to Lys-226. H0497: 5, S0002: 5, H0529: 5, H0556: 4, H0046: 3, L0455: 3, T0042: 3, H0520: 3, H0543: 3, H0265: 2, H0657: 2, H0656: 2, H0458: 2, S0358: 2, H0486: 2, H0050: 2, H0124: 2, H0591: 2, H0494: 2, L0662: 2, H0522: 2, L0740: 2, L0751: 2, L0747: 2, L0588: 2, L0605: 2, H0667: 2, H0686: 1, H0650: 1, H0664: 1, H0125: 1, S0418: 1, H0580: 1, S6014: 1, H0257: 1, H0559: 1, H0635: 1, H0427: 1, H0575: 1, H0052: 1, N0006: 1, L0471: 1, H0373: 1, H0083: 1,			

HPANA28	HPANA28R	1755	2 - 376	3930	Gln-22 to Thr-31, Leu-91 to Leu-104.	H0266: 1, S0250: 1, S0022: 1, H0428: 1, H0031: 1, H0383: 1, H0212: 1, S0366: 1, S0036: 1, H0040: 1, H0634: 1, H0561: 1, S0210: 1, L0770: 1, L0761: 1, L0772: 1, L0641: 1, L0644: 1, L0764: 1, L0776: 1, L0655: 1, L0807: 1, L0657: 1, L0665: 1, S0148: 1, S0126: 1, H0682: 1, H0694: 1, S0037: 1, L0744: 1, L0750: 1, L0755: 1, L0731: 1, S0436: 1, L0596: 1, L0485: 1, L0601: 1, S0276: 1, H0423: 1, S0424: 1 and S0446: 1.		
HPANA87	HPANA87R	1756	494 - 730	3931	Gln-13 to Gly-28.			
HPANB32	HPANB32R	1757	2 - 247	3932	Leu-1 to Ser-8.			
HPANC01	HPANC01R	1758	255 - 446	3933				
HPANE49	HPANE49R	1759	2 - 412	3934				
HPANE52	HPANE52R	1760	1 - 666	3935	Lys-64 to Tyr-75, Pro-114 to Lys-120, Leu-160 to Lys-169.			

HPANE87	HPANE87R	1761	119 - 652	3936	Tyr-172 to Gln-177, Pro-182 to Val-189.	L0752: 10, L0593: 9, L0775: 8, L0588: 8, L0666: 7, L0665: 7, L0592: 7, L0595: 7, L0363: 6, L0774: 6, L0747: 6, L0362: 6, H0422: 6, L0455: 5, L0659: 5, H0539: 5, H0170: 4, S0360: 4, L0657: 4, H0547: 4, L0749: 4, L0779: 4, L0757: 4, H0657: 3, H0412: 3, L0520: 3, L0761: 3, L0646: 3, L0375: 3, L0651: 3, L0783: 3, H0144: 3, H0520: 3, H0659: 3, H0670: 3, H0648: 3, L0740: 3, L0750: 3, L0756: 3, L0731: 3, L0759: 3, L0591: 3, L0608: 3, H0662: 2, S0376: 2, H0637: 2, H0619: 2, L0717: 2, S0280: 2, H0318: 2, T0010: 2, H0040: 2, H0413: 2, L0351: 2, H0646: 2, L0763: 2,		
---------	----------	------	-----------	------	--	---	--	--

L0521: 2, L0784: 2, L0655: 2, L0382: 2, L0809: 2, L0664: 2, H0682: 2, H0658: 2, H0672: 2, L0439: 2, L0755: 2, L0589: 2, L0604: 2, S0424: 2, H0624: 1, H0686: 1, H0685: 1, S0040: 1, H0716: 1, H0341: 1, H0580: 1, S0468: 1, S6026: 1, H0351: 1, H0392: 1, L0623: 1, T0060: 1, H0069: 1, H0427: 1, T0048: 1, T0071: 1, S0049: 1, H0052: 1, L0471: 1, S0388: 1, S0051: 1, S0003: 1, T0006: 1, L0055: 1, H0169: 1, S0036: 1, T0067: 1, H0059: 1, H0494: 1, H0560: 1, S0372: 1, S0002: 1, L0371: 1, L0637: 1, L0627: 1, L0772: 1, L0764: 1, L0662: 1, L0767: 1, L0768: 1, L0649: 1, L4500: 1, L0650: 1, L0378: 1, L0806: 1,						
--	--	--	--	--	--	--

HPANJ67	HPANI67R	1762	3 - 119	3937	Ser-5 to Ser-14, Gln-21 to Gln-28.	L0633: 1, L0628: 1, L0517: 1, L0518: 1, L0789: 1, L0663: 1, L0352: 1, H0684: 1, H0435: 1, H0666: 1, S0330: 1, S0378: 1, S0380: 1, S0152: 1, H0134: 1, S0406: 1, H0436: 1, L0612: 1, L0742: 1, L0748: 1, L0751: 1, S0031: 1, L0596: 1, L0485: 1, L0599: 1, L0601: 1, S0026: 1, H0542: 1, H0543: 1 and H0423: 1.		
HPANK61	HPANK61R	1763	170 - 310	3938		H0328: 2, H0674: 2, L0774: 2, L0805: 2, H0682: 2, L0731: 2, H0306: 1, L0770: 1, L0764: 1, L0809: 1, H0520: 1, H0660: 1, H0521: 1, L0744: 1, L0751: 1, L0750: 1, L0752: 1, S0026: 1, H0352: 1 and L0360: 1.		
HPCOB29	HPCOB29R	1764	2 - 139	3939				
HPCOB69	HPCOB69R	1765	47 - 118	3940				
HPCOJ59	HPCOJ59R	1766	3 - 308	3941	Pro-1 to Val-6,	H0659: 2		

Asp-51 to Phe-56, Asp-83 to Gly-88, Ser-94 to Glu-102.					
Ile-12 to Cys-18.					
HPcOK72	HPcOK72R	1767	197 - 346	3942	
HPcOK73	HPcOK73R	1768	426 - 557	3943	<p>H0591: 62, S0242: 15, L0754: 11, S0003: 9, S0196: 8, L0766: 7, H0144: 6, L0740: 6, L0664: 5, S0420: 4, H0393: 4, L0803: 4, H0428: 3, H0509: 3, H0641: 3, L0777: 3, L0595: 3, L0362: 3, S0360: 2, H0013: 2, L0471: 2, L0163: 2, H0355: 2, H0553: 2, S0036: 2, L0662: 2, L0804: 2, S0374: 2, L0438: 2, S0126: 2, L0748: 2, L0755: 2, L0485: 2, S0412: 2, H0341: 1, S0376: 1, H0580: 1, S0045: 1, H0331: 1, T0039: 1, T0060: 1, H0427: 1, L0021: 1, H0590: 1, H0318: 1, H0194: 1, H0563: 1, H0572: 1, H0051: 1, H0083: 1, S6028: 1, S0312: 1.</p>

							S0214: 1, H0031: 1, H0628: 1, H0598: 1, H0038: 1, H0634: 1, H0616: 1, H0551: 1, H0412: 1, L0370: 1, H0494: 1, H0625: 1, S0440: 1, S0344: 1, H0529: 1, L0770: 1, L0646: 1, L0645: 1, L0648: 1, L0521: 1, L0775: 1, L0525: 1, L0805: 1, L0657: 1, L0782: 1, L0663: 1, L0665: 1, H0547: 1, H0519: 1, H0711: 1, H0659: 1, H0660: 1, H0518: 1, S0152: 1, H0521: 1, L0745: 1, L0759: 1, S0434: 1, L0590: 1, L0592: 1, L0594: 1, H0667: 1, H0423: 1, H0422: 1, S0424: 1 and H0506: 1.				

HPCOQ33	HPCOQ33R	1774	417 - 548	3949		L0803: 8, L0777: 8, L0794: 7, L0766: 7, H0144: 5, L0438: 5, H0547: 5, L0439: 5, H0013: 4, L0779: 4, H0441: 3, S0440: 3, L0762: 3, L0771: 3, L0662: 3, L0666: 3, L0665: 3, L0748: 3, L0752: 3, H0656: 2, H0341: 2, S0418: 2, S0356: 2, H0575: 2, H0328: 2, H0615: 2, H0040: 2, H0477: 2, T0041: 2, L0598: 2, L0763: 2, L0659: 2, L0663: 2, L0664: 2, H0659: 2, L0602: 2, S0406: 2, L0755: 2, L0759: 2, L0592: 2, H0624: 1, H0170: 1, H0171: 1, S0134: 1, H0583: 1, H0650: 1, H0657: 1, L0415: 1, S0116: 1, H0661: 1, H0664: 1, S0420: 1, L0005: 1, S0444: 1, S0360: 1, S0408: 1, S0046: 1, S0476: 1,
HPCOQ85	HPCOQ85R	1775	2 - 259	3950		

					S0300: 1, L0717: 1, H0411: 1, H0486: 1, T0039: 1, H0318: 1, H0581: 1, H0123: 1, H0014: 1, H0354: 1, H0179: 1, S0003: 1, H0628: 1, H0032: 1, S0036: 1, L0060: 1, H0264: 1, H0412: 1, L0564: 1, H0625: 1, H0131: 1, H0646: 1, S0002: 1, L0770: 1, L0637: 1, L0761: 1, L0800: 1, L0764: 1, L0649: 1, L0804: 1, L0650: 1, L0519: 1, L0352: 1, H0519: 1, S0126: 1, H0658: 1, H0648: 1, H0672: 1, S0328: 1, S0330: 1, H0518: 1, H0696: 1, H0704: 1, S0027: 1, L0743: 1, L0754: 1, L0747: 1, L0758: 1, S0434: 1, L0591: 1, S0011: 1, H0543: 1, H0422: 1, H0506: 1 and H0721: 1.					
--	--	--	--	--	---	--	--	--	--	--

HPCOR52	HPCOR52R	1778	43 - 432	3953				S0414: 16, S0360: 6, S0358: 5, L0766: 5, H0574: 4, H0521: 4, L0754: 4, L0756: 4, S0422: 3, L0770: 3, H0547: 3, H0672: 3, L0596: 3, H0251: 2, H0615: 2, H0090: 2, L0646: 2, L0662: 2, L0776: 2, L0659: 2, L0752: 2, L0758: 2, S0436: 2, L0595: 2, H0624: 1, L0002: 1, H0583: 1, H0650: 1, S0116: 1, S0298: 1, S0282: 1, S0418: 1, H0722: 1, H0734: 1, S0045: 1, S0300: 1, L0717: 1, S0222: 1, H0013: 1, L0021: 1, H0706: 1, L0105: 1, H0263: 1, L0041: 1, H0057: 1, S0050: 1, L0163: 1, H0051: 1, S0388: 1, S0051: 1, H0271: 1, S0003: 1, H0644: 1, H0032: 1, H0673: 1, H0379: 1, H0272: 1, H0059: 1,
HPCOU70	HPCOU70R	1779	137 - 355	3954				

							H0130: 1, H0647: 1, S0210: 1, S0426: 1, H0529: 1, L0637: 1, L0372: 1, L0649: 1, L0775: 1, L0651: 1, L0806: 1, L0657: 1, L0518: 1, L0788: 1, L0666: 1, L0663: 1, L0665: 1, H0144: 1, L0438: 1, H0519: 1, H0689: 1, H0690: 1, H0659: 1, S0380: 1, H0696: 1, S0406: 1, H0436: 1, H0478: 1, H0727: 1, L0439: 1, L0731: 1, H0595: 1, S0434: 1, L0608: 1, H0667: 1, S0196: 1, H0422: 1, S0424: 1 and H0506: 1.			
HPCOV35	HPCOV35R	1780	151 - 657	3955	Lys-4 to Lys-16.					
HPCOV41	HPCOV41R	1781	3 - 356	3956						
HPCOX43	HPCOX43R	1782	158 - 418	3957	Asn-9 to Trp-14, Pro-20 to Arg-46.					
HPCPB38	HPCPB38R	1783	294 - 473	3958			L0439: 3, L0438: 1, H0659: 1, H0648: 1 and S0330: 1.			
HPCPD26	HPCPD26R	1784	3 - 314	3959						
HPCPE33	HPCPE33R	1785	308 - 427	3960			H0551: 11, L0766: 10, L0794: 8, S0026: 7.			

H0556: 6, L0770: 6, H0659: 6, H0521: 6, L0740: 5, H0661: 4, H0638: 4, H0497: 4, H0560: 4, H0170: 3, H0341: 3, S0360: 3, H0318: 3, H0561: 3, L0731: 3, L0757: 3, H0265: 2, S0418: 2, S0420: 2, S0356: 2, S0132: 2, S0278: 2, T0115: 2, T0110: 2, H0083: 2, S0214: 2, H0622: 2, H0617: 2, S0364: 2, H0090: 2, T0042: 2, H0366: 2, H0646: 2, S0002: 2, H0529: 2, L0369: 2, L0769: 2, L0646: 2, L0776: 2, L0655: 2, L0809: 2, L0789: 2, L0656: 2, L0664: 2, L0771: 2, L0758: 2, L0593: 2, H0658: 2, H0543: 2, H0423: 2, T0002: 1, S0342: 1, H0716: 1, H0657: 1, S0212: 1, H0402: 1, L0005: 1, S0376: 1, H0580: 1, H0339: 1,
--

L0717: 1, H0370: 1, S0005: 1, H0257: 1, H0485: 1, T0109: 1, H0635: 1, H0309: 1, H0046: 1, L0471: 1, H0014: 1, H0266: 1, S0003: 1, S0022: 1, H0615: 1, H0031: 1, S0366: 1, H0038: 1, H0616: 1, H0413: 1, T0041: 1, H0625: 1, L0065: 1, S0440: 1, S0150: 1, H0641: 1, S0344: 1, S0422: 1, H0026: 1, H0517: 1, L0763: 1, L0761: 1, L0630: 1, L0800: 1, L0641: 1, L0642: 1, L0771: 1, L0768: 1, L0803: 1, L0650: 1, L0775: 1, L0805: 1, L0653: 1, L0657: 1, L0663: 1, H0693: 1, H0519: 1, S0126: 1, H0658: 1, S0330: 1, S0152: 1, H0522: 1, H0696: 1, S0406: 1, H0436: 1, H0626: 1, S3014: 1, S0027: 1, S0206: 1, L0596: 1,						
--	--	--	--	--	--	--

HPCPH50	HPCPH50R	1786	93 - 209	3961		S0194: 1, H0542: 1, H0422: 1 and H0506: 1.		
HPCPH51	HPCPH51R	1787	203 - 412	3962	Pro-10 to Val-15, Ser-25 to Asn-32.	H0659: 2, L0752: 2, L0595: 2 and H0686: 1.		
HPCPH52	HPCPH52R	1788	3 - 101	3963				
HPCPH68	HPCPH68R	1789	191 - 322	3964				
HPCPU27	HPCPU27R	1790	3 - 116	3965				
HPCPW09	HPCPW09R	1791	201 - 407	3966	Pro-29 to Gln-38. Gln-47 to Lys-55.	L0766: 10, L0754: 9, S0358: 6, H0616: 6, H0551: 5, L0439: 5, H0657: 4, H0497: 4, S0003: 4, H0038: 4, S0422: 4, S0374: 4, H0659: 4, S0045: 3, H0644: 3, H0412: 3, H0529: 3, L0662: 3, L0805: 3, L0657: 3, L0663: 3, H0521: 3, H0624: 2, H0171: 2, S0040: 2, H0638: 2, S0418: 2, L0005: 2, S0376: 2, H0546: 2, H0046: 2, H0553: 2, H0169: 2, H0591: 2, H0413: 2, H0623: 2, L0646: 2, L0771: 2, L0803: 2, L0526: 2, L0666: 2, L0664: 2.		

S0330: 2, S0380: 2, L0748: 2, L0777: 2, L0758: 2, S0242: 2, H0170: 1, H0656: 1, S0116: 1, H0341: 1, S0212: 1, H0671: 1, S0356: 1, S0442: 1, S0360: 1, S0132: 1, H0619: 1, L0717: 1, S0278: 1, H0574: 1, H0632: 1, H0486: 1, T0114: 1, H0013: 1, L0105: 1, S0474: 1, T0110: 1, H0545: 1, L0471: 1, H0373: 1, H0290: 1, H0688: 1, H0622: 1, L0483: 1, H0628: 1, L0055: 1, H0673: 1, H0674: 1, H0068: 1, H0090: 1, H0056: 1, T0041: 1, H0560: 1, H0561: 1, S0440: 1, H0509: 1, S0150: 1, H0646: 1, S0144: 1, L0598: 1, H0517: 1, L0369: 1, L0372: 1, L0773: 1, L0804: 1, L0774: 1, L0653: 1, L0655: 1, L0527: 1, L0659: 1,							
--	--	--	--	--	--	--	--

							L0518: 1, L0783: 1, L0809: 1, L0647: 1, H0144: 1, H0520: 1, H0648: 1, S0328: 1, S0152: 1, H0555: 1, S3014: 1, L0747: 1, L0749: 1, S0031: 1, L0684: 1, S0436: 1, L0608: 1, L0595: 1, S0011: 1, S0026: 1, H0136: 1, H0543: 1, H0423: 1 and H0506: 1.			
HPCPX80	HPCPX80R	1792	209 - 298	3967	His-25 to Lys-30.		H0659: 2, L0438: 1 and L0439: 1.			
HPCQ079	HPCQ079R	1793	74 - 256	3968	Thr-19 to Leu-24.		H0521: 13, L0659: 10, L0779: 10, H0551: 9, S0360: 6, S0214: 6, L0770: 6, L0649: 6, L0666: 6, L0731: 6, H0170: 5, H0638: 5, S0376: 5, H0580: 5, H0575: 5, H0553: 5, S0210: 5, L0662: 5, L0776: 5, L0657: 5, H0547: 5, L0439: 5, H0656: 4, S0358: 4, H0676: 4, H0574: 4, H0486: 4, H0318: 4, S0003: 4, L0655: 4.			
HPCQ091	HPCQ091R	1794	270 - 479	3969						

L0663: 4, L0665: 4, H0659: 4, L0756: 4, L0757: 4, H0445: 4, H0542: 4, S0212: 3, H0009: 3, L0157: 3, L0471: 3, H0024: 3, H0494: 3, L0763: 3, L0637: 3, L0646: 3, L0764: 3, S0052: 3, H0672: 3, L0748: 3, L0750: 3, L0752: 3, L0755: 3, L0608: 3, S0026: 3, H0543: 3, H0171: 2, H0556: 2, H0657: 2, L0785: 2, S0420: 2, L0005: 2, H0156: 2, S0474: 2, H0581: 2, H0251: 2, H0545: 2, H0373: 2, H0477: 2, H0412: 2, H0413: 2, T0041: 2, S0466: 2, H0641: 2, S0144: 2, L0372: 2, L0774: 2, L0805: 2, L0783: 2, L0664: 2, S0374: 2, L0438: 2, H0638: 2, H0670: 2, H0660: 2, H0539: 2, H0522: 2, H0436: 2, L0742: 2, L0777: 2,
--

L0758: 2, L0759: 2, L0596: 2, L0599: 2, L0362: 2, S0192: 2, H0265: 1, S0040: 1, H0295: 1, H0583: 1, H0650: 1, S0116: 1, H0663: 1, H0662: 1, H0619: 1, S0278: 1, H0261: 1, S0222: 1, H0431: 1, H0592: 1, H0586: 1, H0485: 1, H0013: 1, H0069: 1, H0427: 1, H0098: 1, H0042: 1, H0004: 1, H0274: 1, L0105: 1, H0505: 1, H0052: 1, H0327: 1, H0544: 1, H0546: 1, H0046: 1, H0150: 1, H0015: 1, T0010: 1, H0510: 1, H0375: 1, H0188: 1, H0252: 1, H0328: 1, H0039: 1, T0006: 1, H0031: 1, L0055: 1, H0032: 1, H0169: 1, H0124: 1, H0598: 1, H0090: 1, H0040: 1, H0059: 1, L0564: 1, H0560: 1, H0625: 1, H0561: 1, H0647: 1,
--

							H0646: 1, S0142: 1, S0344: 1, S0002: 1, S0426: 1, H0695: 1, L0369: 1, L0772: 1, L0765: 1, L0771: 1, L0648: 1, L0560: 1, L0386: 1, L0381: 1, L0804: 1, L0775: 1, L0806: 1, L0658: 1, S0428: 1, H0144: 1, H0520: 1, S0126: 1, H0690: 1, H0682: 1, H0435: 1, H0666: 1, S0330: 1, S0380: 1, H0518: 1, S0152: 1, S0350: 1, H0696: 1, S0044: 1, S0037: 1, S0028: 1, L0747: 1, S0031: 1, H0444: 1, L0588: 1, L0594: 1, L0601: 1, S0011: 1, H0667: 1, H0423: 1, H0422: 1 and H0008: 1.				
HPCCQ66	HPCCQ66R	1795	113 - 271	3970							
HPCCQT27	HPCCQT27R	1796	119 - 265	3971							
HPCCQT88	HPCCQT88R	1797	1 - 345	3972							
HPCCQW64	HPCCQW64R	1798	2 - 229	3973	Pro-3 to Cys-9, Asn-28 to Phe-37.						
HPCCQW77	HPCCQW77R	1799	259 - 408	3974				L0758: 6, L0779: 5, L0766: 4, L0731: 4,			

HPCOX47	HPCOX47R	1800	174 - 326	3975	Lvs-1 to Val-6.	S0360: 2, L0769: 2, L0649: 2, H0648: 2, L0744: 2, L0740: 2, L0747: 2, L0771: 2, L0755: 2, L0757: 2, L0599: 2, H0171: 1, T0049: 1, H0657: 1, H0255: 1, H0638: 1, S0408: 1, H0619: 1, H0037: 1, H0052: 1, L0471: 1, H0014: 1, H0316: 1, S0438: 1, L0520: 1, L0763: 1, L0770: 1, L0637: 1, L0761: 1, L0373: 1, L0764: 1, L0774: 1, L0775: 1, L0375: 1, L0776: 1, L0655: 1, L0527: 1, L0542: 1, L0382: 1, L0519: 1, H0144: 1, H0682: 1, H0659: 1, H0660: 1, H0696: 1, H0555: 1, S3012: 1, L0439: 1, L0751: 1, L0754: 1, L0745: 1, L0749: 1, L0752: 1, L0759: 1, H0542: 1, S0458: 1 and S0384: 1.
---------	----------	------	-----------	------	-----------------	--

HPCRN90	HPCRN90R	1801	2 - 109	3976					
HPCTD21	HPCTD21R	1802	228 - 560	3977	Ser-8 to Lys-21, Gln-47 to Glu-52, Arg-72 to Arg-87.				
HPCTD23	HPCTD23R	1803	350 - 760	3978	Met-4 to Lys-18, Gln-44 to Glu-49, Arg-69 to Arg-84.				
HPCTD25	HPCTD25R	1804	269 - 598	3979	Asn-1 to Lys-20, Gln-46 to Glu-51, Arg-71 to Arg-86.				
HPCTD61	HPCTD61R	1805	354 - 713	3980	Asn-1 to Lys-21, Gln-47 to Glu-52, Arg-72 to Arg-87.				
HPCTF29	HPCTF29R	1806	2 - 595	3981					L0655: 22, H0648: 8, H0638: 4, H0318: 4, L0776: 4, L0659: 4, L0751: 4, L0747: 4, L0599: 4, S0358: 3, L0761: 3, L0775: 3, L0760: 2, H0255: 2, H0663: 2, S0360: 2, H0486: 2, L0142: 2, H0087: 2, L0662: 2, L0378: 2, L0653: 2, L0783: 2, L0666: 2, L0664: 2, L0665: 2, L0743: 2, L0756: 2, L0777: 2, L0362: 2, L0600: 2, H0650: 1,
HPCTF83	HPCTF83R	1807	1 - 177	3982					

	H0657: 1, H0692: 1, H0381: 1, H0306: 1, H0402: 1, H0305: 1, S0376: 1, S0300: 1, H0441: 1, L0622: 1, L0623: 1, L0586: 1, H0635: 1, L0022: 1, H0042: 1, H0575: 1, H0581: 1, H0052: 1, H0597: 1, H0231: 1, H0109: 1, H0029: 1, H0039: 1, T0006: 1, H0031: 1, H0166: 1, H0673: 1, H0674: 1, H0163: 1, H0063: 1, H0413: 1, H0359: 1, H0396: 1, H0647: 1, H0646: 1, S0002: 1, H0529: 1, L0762: 1, L0769: 1, L0667: 1, L0772: 1, L0372: 1, L0771: 1, L0767: 1, L0768: 1, L0387: 1, L0766: 1, L0774: 1, L0784: 1, L0606: 1, L0607: 1, L0629: 1, L0657: 1, L0518: 1, L0782: 1, L0809: 1, L0787: 1, L0789: 1, L0790: 1, L0663: 1,
--	--

							H0690: 1, H0659: 1, H0672: 1, H0651: 1, S0328: 1, S0378: 1, H0521: 1, H0522: 1, S0044: 1, H0214: 1, H0187: 1, L0748: 1, L0740: 1, L0755: 1, H0445: 1, H0595: 1, S0106: 1, S0462: 1 and H0677: 1.		
HPCTI39	HPCTI39R	1808	1 - 114	3983					
HPCTI86	HPCTI86R	1809	1 - 306	3984					
					Lys-37 to Arg-42, Ser-74 to Thr-81.				
HPCTN62	HPCTN62R	1810	341 - 451	3985					
HPCTO69	HPCTO69R	1811	23 - 538	3986	Arg-6 to Asp-15.				
HPCTP60	HPCTP60R	1812	191 - 343	3987			H0052: 3, H0624: 2, H0014: 2, H0375: 2, L0598: 2, L0662: 2, L0803: 2, L0792: 2, L0666: 2, L0664: 2, H0659: 2, L0742: 2, L0743: 2, L0754: 2, H0423: 2, H0171: 1, H0686: 1, S0360: 1, H0486: 1, H0194: 1, L0041: 1, L0471: 1, H0687: 1, H0040: 1, H0264: 1, S0440: 1, S0422: 1, L0761: 1, L0646: 1, L0804: 1,		

HPCTR60	HPCTR60R	1813	307 - 495	3988			L0352: 1, H0670: 1, L0744: 1, L0740: 1, L0780: 1, L0759: 1 and H0506: 1.		
HPCTI47	HPCTI47R	1814	3 - 128	3989	Gly-4 to Lys-9.		L0803: 2, H0413: 1, L0650: 1, L0666: 1, H0689: 1, H0659: 1, H0658: 1, L0758: 1, L0759: 1 and S0242: 1.		
HPCTV40	HPCTV40R	1815	3 - 377	3990					
HPCTV53	HPCTV53R	1816	2 - 274	3991	Pro-7 to Ala-13.				
HPCTV92	HPCTV92R	1817	2 - 205	3992					
HPCTX22	HPCTX22R	1818	1 - 153	3993	Asn-27 to Lys-36.		L0439: 11, L0740: 10, L0752: 10, L0659: 8, L0748: 7, L0005: 6, S0358: 6, L0471: 6, S0214: 6, L0803: 6, L0517: 6, L0666: 6, L0759: 6, L0664: 5, L0665: 5, S0126: 5, H0574: 4, H0156: 4, L0646: 4, L0771: 4, L0766: 4, S0374: 4, H0659: 4, L0754: 4, L0749: 4, L0731: 4, L0362: 4, H0170: 3, H0341: 3, H0632: 3, S0003: 3, H0413: 3, H0529: 3, L0369: 3,		

L0770: 3, L0637: 3, L0775: 3, L0663: 3, S0378: 3, H0478: 3, S0026: 3, S0212: 2, S0360: 2, H0580: 2, S0045: 2, H0431: 2, H0331: 2, H0427: 2, H0599: 2, H0039: 2, H0553: 2, H0551: 2, S0002: 2, L0772: 2, L0653: 2, L0654: 2, L0776: 2, L0655: 2, L0661: 2, H0547: 2, H0519: 2, S0028: 2, L0755: 2, H0543: 2, H0624: 1, H0171: 1, T0002: 1, H0657: 1, H0656: 1, L0415: 1, S0116: 1, S0418: 1, S0420: 1, S0354: 1, L0430: 1, H0208: 1, H0642: 1, H0013: 1, L0021: 1, T0082: 1, S0010: 1, H0318: 1, H0052: 1, H0544: 1, H0123: 1, H0620: 1, H0024: 1, H0014: 1, H0275: 1, H0355: 1, H0510: 1, H0266: 1, H0290: 1, H0615: 1,						
--	--	--	--	--	--	--

HPCTY38	HPCTY38R	1819	381 - 578	3994		L0483: 1, H0048: 1, H0644: 1, H0032: 1, H0068: 1, H0040: 1, H0380: 1, T0069: 1, H0560: 1, H0625: 1, H0561: 1, S0440: 1, H0509: 1, H0641: 1, H0646: 1, S0144: 1, S0422: 1, S0426: 1, L0373: 1, L0388: 1, L0651: 1, L0378: 1, L0809: 1, L0647: 1, L0438: 1, H0689: 1, H0683: 1, H0684: 1, H0648: 1, S0330: 1, H0539: 1, H0321: 1, S0013: 1, L0779: 1, L0758: 1, H0667: 1, H0136: 1, S0194: 1, H0542: 1, H0422: 1 and S0424: 1.		
						L0666: 19, L0752: 14, S0358: 12, L0770: 10, L0439: 10, L0754: 10, L0659: 8, H0574: 7, L0663: 7, L0664: 7, H0659: 7, L0758: 7, L0759: 7, S0408: 6, H0519: 6, L0740: 6, L0750: 6, L0731: 6,		

L0717: 5, L0771: 5, L0775: 5, L0776: 5, L0783: 5, H0648: 5, L0756: 5, L0362: 5, S0442: 4, H0413: 4, S0422: 4, L0638: 4, L0646: 4, H0547: 4, L0748: 4, L0592: 4, H0170: 3, H0580: 3, H0266: 3, H0591: 3, H0529: 3, L0637: 3, L0803: 3, L0774: 3, L0665: 3, H0660: 3, L0747: 3, H0542: 3, H0543: 3, H0657: 2, S0420: 2, S0354: 2, S0444: 2, S0360: 2, H0013: 2, H0544: 2, H0015: 2, H0051: 2, H0687: 2, H0328: 2, H0674: 2, S0036: 2, H0412: 2, S0438: 2, S0440: 2, L0640: 2, L0769: 2, L0773: 2, L0662: 2, L0766: 2, L0650: 2, L0806: 2, L0805: 2, H0144: 2, S0374: 2, H0691: 2, S0328: 2, S0330: 2, H0696: 2, L0751: 2,						
--	--	--	--	--	--	--

S0436: 2, L0591: 2, L0581: 2, H0423: 2, H0624: 1, H0685: 1, H0583: 1, H0656: 1, H0341: 1, S0212: 1, S0282: 1, H0662: 1, H0638: 1, H0208: 1, S0045: 1, S0300: 1, H0455: 1, L0105: 1, H0123: 1, H0024: 1, H0239: 1, S6028: 1, S0250: 1, S0003: 1, H0615: 1, H0428: 1, T0006: 1, H0135: 1, H0616: 1, H0551: 1, S0386: 1, L0564: 1, T0041: 1, H0625: 1, H0509: 1, S0472: 1, H0646: 1, L0369: 1, L0762: 1, L0763: 1, L4747: 1, L0796: 1, L0639: 1, L0667: 1, L0772: 1, L0372: 1, L0642: 1, L0648: 1, L0767: 1, L0794: 1, L0804: 1, L0651: 1, L0653: 1, L0606: 1, L0607: 1, L0807: 1, L0527: 1, L0657: 1, L0512: 1, L0526: 1,							
--	--	--	--	--	--	--	--

							L0547: 1, L0518: 1, L0782: 1, L0809: 1, L0367: 1, L0565: 1, L0438: 1, H0520: 1, S0126: 1, H0435: 1, H0670: 1, H0666: 1, H0539: 1, S0406: 1, H0478: 1, S0028: 1, L0744: 1, L0786: 1, L0757: 1, S0260: 1, H0445: 1, L0588: 1, L0608: 1, S0412: 1, S0462: 1 and H0506: 1.			
HPDOA92	HPDOA92R	1820	57 - 209	3995	Asp-1 to Leu-6.					
HPDOF32	HPDOF32R	1821	1 - 99	3996						
HPDOF81	HPDOF81R	1822	3 - 287	3997	Gln-20 to Leu-25.					
HPDOP05	HPDOP05R	1823	2 - 412	3998	Asp-11 to Val-19, Cys-36 to Asp-58, Lys-102 to Lys-111, Ile-115 to Ala-125, Val-127 to Gln-132.	L0747: 12, L0750: 12, H0052: 9, H0547: 8, H0659: 8, L0439: 8, L0752: 8, S0360: 7, S0408: 7, S0222: 6, S0010: 6, H0494: 6, H0144: 6, H0657: 5, S0358: 5, H0393: 5, H0373: 5, H0551: 5, L0775: 5, L0666: 5, L0758: 5, H0542: 5, H0486: 4, H0013: 4, H0545: 4, H0046: 4, L0471: 4, H0687: 4,				

	H0644: 4, L0769: 4, L0521: 4, L0657: 4, L0659: 4, L0663: 4, S0374: 4, L0757: 4, H0423: 4, H0713: 3, H0716: 3, H0638: 3, S0376: 3, H0592: 3, S0474: 3, H0327: 3, H0553: 3, S0036: 3, H0412: 3, S0440: 3, L0651: 3, L0545: 3, L0438: 3, H0520: 3, H0435: 3, S0380: 3, S0027: 3, H0445: 3, H0665: 3, S0194: 3, H0543: 3, H0717: 2, T0049: 2, S0356: 2, S0442: 2, S0444: 2, S0410: 2, S0045: 2, S0476: 2, H0587: 2, H0427: 2, H0575: 2, H0706: 2, S0346: 2, H0581: 2, H0194: 2, H0530: 2, H0620: 2, T0010: 2, H0356: 2, H0615: 2, H0039: 2, H0617: 2, H0032: 2, H0673: 2, H0068: 2, H0038: 2, S0438: 2, S0150: 2, H0647: 2,
--	--

L0598: 2, L0638: 2, L0646: 2, L0764: 2, L0773: 2, L0768: 2, L0794: 2, L0766: 2, L0774: 2, L0806: 2, L0655: 2, L0809: 2, L0664: 2, L0663: 2, S0428: 2, H0725: 2, H0519: 2, S0126: 2, H0690: 2, H0682: 2, H0684: 2, S0328: 2, H0522: 2, H0696: 2, S0390: 2, S0028: 2, L0748: 2, L0755: 2, L0731: 2, L0759: 2, H0444: 2, S0436: 2, L0592: 2, L0599: 2, S0011: 2, H0136: 2, H0506: 2, H0624: 1, H0170: 1, H0686: 1, S0134: 1, S0430: 1, H0583: 1, H0650: 1, H0656: 1, S0282: 1, H0255: 1, H0661: 1, H0663: 1, H0662: 1, H0241: 1, H0300: 1, H0125: 1, S0420: 1, H0637: 1, H0580: 1, S0007: 1, S0046: 1, S0132: 1, S0278: 1,							
--	--	--	--	--	--	--	--

H0431: 1, H0415: 1, H0442: 1, H0438: 1, H0586: 1, H0574: 1, L0622: 1, T0040: 1, H0250: 1, H0156: 1, L0021: 1, H0002: 1, T0082: 1, T0048: 1, H0318: 1, H0310: 1, H0251: 1, H0263: 1, H0597: 1, L0738: 1, H0546: 1, H0569: 1, H0050: 1, H0024: 1, H0578: 1, H0014: 1, H0015: 1, L0163: 1, H0051: 1, S0388: 1, H0083: 1, H0399: 1, S6028: 1, H0398: 1, S0003: 1, S0214: 1, H0428: 1, L0483: 1, H0181: 1, H0606: 1, H0166: 1, H0169: 1, H0708: 1, H0163: 1, T0067: 1, H0264: 1, H0488: 1, H0413: 1, L0564: 1, H0022: 1, T0041: 1, H0512: 1, L0475: 1, H0561: 1, S0294: 1, L0065: 1, H0641: 1, H0633: 1, S0472: 1, S0422: 1,
--

HPDOP20	HPDOP20R	1824	3 - 512	3999			H0529: 1, L0536: 1, L0770: 1, L0761: 1, L0772: 1, L0773: 1, L0771: 1, L0648: 1, L0662: 1, L0803: 1, L0606: 1, L0629: 1, L0636: 1, L0517: 1, L0526: 1, L0783: 1, L0384: 1, L0544: 1, L0367: 1, H0697: 1, S0122: 1, H0689: 1, H0711: 1, H0683: 1, H0658: 1, H0660: 1, H0648: 1, H0672: 1, H0539: 1, H0710: 1, H0518: 1, H0521: 1, H0555: 1, H0478: 1, S0037: 1, L0740: 1, L0754: 1, L0756: 1, L0777: 1, L0753: 1, S0434: 1, L0588: 1, L0591: 1, L0594: 1, H0668: 1, S0026: 1, H0422: 1 and S0424: 1.
HPDOS87	HPDOS87R	1825	3 - 272	4000			
HPDOU54	HPDOU54R	1826	3 - 287	4001			H0694: 48, L0777: 14, H0521: 11, L0794: 10, L0748: 10, L0747: 10, S0214: 9, S0360: 8.

S0003: 8, H0644: 8, L0439: 8, H0533: 7, L0662: 7, L0659: 7, L0588: 7, H0543: 7, H0038: 6, L0646: 6, H0436: 6, L0740: 6, H0341: 5, S0338: 5, H0580: 5, H0545: 5, H0494: 5, L0666: 5, L0665: 5, L0779: 5, L0599: 5, H0542: 5, H0656: 4, H0486: 4, H0046: 4, H0014: 4, H0551: 4, S0440: 4, H0529: 4, L0764: 4, L0809: 4, S0126: 4, S0406: 4, L0757: 4, S0436: 4, L0591: 4, L0485: 4, L0362: 4, H0423: 4, H0624: 3, S0376: 3, S0444: 3, S0408: 3, S0410: 3, H0581: 3, H0031: 3, H0090: 3, S0142: 3, L0770: 3, L0637: 3, L0772: 3, L0521: 3, L0766: 3, L0774: 3, L0663: 3, L0664: 3, T0068: 3, H0547: 3, H0539: 3, L0758: 3,
--

H0445: 3, S0194: 3, H0171: 2, H0556: 2, S0134: 2, H0650: 2, H0657: 2, S0418: 2, H0619: 2, H0411: 2, H0013: 2, S0010: 2, H0544: 2, H0510: 2, S6028: 2, S0022: 2, L0483: 2, T0006: 2, H0591: 2, H0616: 2, T0067: 2, H0412: 2, T0042: 2, H0560: 2, H0646: 2, S0422: 2, L0804: 2, L0775: 2, L0805: 2, L0783: 2, L4775: 2, H0670: 2, H0648: 2, H0710: 2, H0555: 2, H0478: 2, S3012: 2, S0027: 2, L0754: 2, L0749: 2, L0753: 2, L0759: 2, S0434: 2, L0592: 2, L0604: 2, S0011: 2, S0276: 2, S0040: 1, H0716: 1, S0114: 1, L0760: 1, S0116: 1, H0662: 1, H0459: 1, S0442: 1, S0045: 1, S0476: 1, H0393: 1, S0278: 1, H0550: 1,
--

S0222: 1, H0431: 1, H0455: 1, H0600: 1, H0592: 1, H0586: 1, H0331: 1, H0574: 1, H0485: 1, T0040: 1, T0109: 1, H0427: 1, H0156: 1, H0575: 1, H0004: 1, H0274: 1, S0346: 1, H0310: 1, H0052: 1, L0040: 1, H0597: 1, H0572: 1, H0123: 1, H0050: 1, L0471: 1, H0375: 1, H0594: 1, H0687: 1, H0252: 1, H0039: 1, L0142: 1, H0628: 1, H0617: 1, H0032: 1, H0169: 1, H0674: 1, L0455: 1, H0068: 1, H0598: 1, H0135: 1, H0163: 1, H0634: 1, H0264: 1, H0272: 1, H0413: 1, T0069: 1, T0041: 1, H0625: 1, H0561: 1, S0450: 1, S0438: 1, H0509: 1, H0131: 1, H0654: 1, S0344: 1, S0210: 1, S0002: 1, S0426: 1, L0451: 1, L0520: 1,
--

							L0762: 1, L0763: 1, L0761: 1, L0773: 1, L0768: 1, L0386: 1, L0650: 1, L0375: 1, L0651: 1, L0654: 1, L0776: 1, L0527: 1, L0526: 1, L0518: 1, L0519: 1, L0545: 1, L0787: 1, L4501: 1, S0428: 1, S0216: 1, H0144: 1, H0691: 1, S0148: 1, H0519: 1, H0435: 1, H0658: 1, H0660: 1, H0666: 1, S0330: 1, S0152: 1, S0044: 1, H0479: 1, S0390: 1, S3014: 1, L0744: 1, L0750: 1, L0756: 1, L0752: 1, L0755: 1, L0731: 1, H0707: 1, L0594: 1, L0361: 1, S0026: 1, H0665: 1, S0196: 1, H0422: 1, S0458: 1 and H0506: 1.			
HPDOZ43	HPDOZ43R	1827	1 - 504	4002						
HPDPC65	HPDPC65RA	1828	2 - 178	4003						
HPDPC90	HPDPC90RA	1829	294 - 485	4004		Pro-6 to Gly-35, Arg-41 to Glu-47.				
HPDPH14	HPDPH14R	1830	94 - 291	4005						

HPDPK37	HPDPK37R	1831	1 - 420	4006			L0784: 2, H0428: 1, H0644: 1, S0366: 1, L0659: 1, L0636: 1, L0789: 1 and H0658: 1.	
HPDPN83	HPDPN83R	1832	365 - 3	4007				
HPDPR69	HPDPP69R	1833	260 - 463	4008			L0766: 2 and H0658: 2.	
HPDPQ10	HPDPQ10R	1834	369 - 581	4009	Gln-15 to Arg-20, Arg-35 to Ser-40.			
HPDPQ16	HPDPQ16R	1835	244 - 456	4010	Ile-5 to Lys-20.		L0794: 4, H0351: 3, H0083: 2, H0520: 2, H0658: 2, H0657: 1, H0341: 1, S0358: 1, L0586: 1, L0021: 1, T0110: 1, H0328: 1, H0040: 1, H0616: 1, H0625: 1, S0438: 1, S0440: 1, S0150: 1, H0130: 1, H0641: 1, L0800: 1, L0768: 1, L0803: 1, L0776: 1, L0657: 1, H0660: 1, S0328: 1, S0380: 1, S0406: 1, L0747: 1, H0343: 1, H0136: 1, H0423: 1, H0422: 1 and S0424: 1.	
HPDPR73	HPDPR73R	1836	80 - 463	4011	Asp-28 to His-35, Phe-43 to Trp-48, Asn-81 to Arg-86.			

HPDPS51	HPDPS51R	1837	2 - 214	4012		L0770: 4, L0771: 4, L0769: 3, L0757: 3, L0766: 2, L0779: 2, L0758: 2, H0170: 1, H0686: 1, S0476: 1, H0586: 1, L0637: 1, L0761: 1, L0803: 1, L0774: 1, L0776: 1, L0659: 1, L0809: 1, L0791: 1, H0658: 1, H0696: 1, S3012: 1, S0390: 1, L0747: 1, L0752: 1, L0753: 1, L0759: 1, S0434: 1, L0592: 1 and H0543: 1.		
HPDPS90	HPDPS90R	1838	2 - 421	4013				
HPDPT86	HPDPT86R	1839	378 - 533	4014	Asp-17 to Asn-30.	L0439: 4, H0658: 2, S0474: 1, L0794: 1, L0804: 1, L0791: 1, L0755: 1 and L0599: 1.		
HPDP66	HPDP66R	1840	2 - 262	4015				
HPDPX12	HPDPX12RP 00B	1841	2 - 418	4016				
HPDPY83	HPDPY83RP 00B	1842	148 - 405	4017	Lys-32 to Glu-39, Glu-43 to Ala-50, Ala-52 to Glu-80.			
HPDQC34	HPDQC34R	1843	1 - 693	4018				
HPDQG58	HPDQG58R	1844	2 - 235	4019				
HPDQH11	HPDQH11R	1845	2 - 334	4020				

HPDQH34	HPDQH34R	1846	105 - 308	4021	Gln-12 to Ser-19, Gln-40 to Gln-54.	H0052: 11, L0439: 10, L0775: 8, H0046: 7, L0748: 7, L0438: 6, L0750: 6, L0666: 5, L0599: 5, S0358: 4, H0620: 4, H0038: 4, H0413: 4, L0369: 4, L0769: 4, L0659: 4, L0665: 4, S0328: 4, L0758: 4, S0418: 3, S0442: 3, S0410: 3, H0619: 3, H0599: 3, L0662: 3, L0768: 3, L0774: 3, L0653: 3, H0660: 3, H0521: 3, L0731: 3, S0434: 3, L0601: 3, S0026: 3, S0424: 3, H0556: 2, T0002: 2, H0295: 2, H0583: 2, H0656: 2, S0376: 2, S0444: 2, H0580: 2, S0045: 2, S0046: 2, S0222: 2, H0592: 2, H0586: 2, N0009: 2, H0013: 2, H0575: 2, H0618: 2, H0318: 2, H0196: 2, H0012: 2, H0373: 2,
HPDQ150	HPDQ150R	1847	3 - 545	4022		

T0010: 2, S6028: 2, S0214: 2, H0031: 2, L0456: 2, H0708: 2, H0551: 2, H0264: 2, S0440: 2, H0509: 2, H0529: 2, L0763: 2, L0638: 2, L0637: 2, L0764: 2, L0381: 2, L0657: 2, L0783: 2, L0663: 2, S0152: 2, H0478: 2, S0028: 2, L0741: 2, L0777: 2, L0596: 2, L0588: 2, L0589: 2, L0605: 2, L0604: 2, H0665: 2, H0136: 2, H0543: 2, H0170: 1, H0265: 1, S0040: 1, H0717: 1, H0657: 1, L0417: 1, L0785: 1, H0381: 1, S0116: 1, H0341: 1, H0664: 1, H0402: 1, H0450: 1, S0356: 1, S0360: 1, H0208: 1, S0476: 1, H0411: 1, H0409: 1, H0613: 1, H0587: 1, H0497: 1, H0333: 1, H0643: 1, H0574: 1, L0623: 1, T0039: 1, H0427: 1,
--

L0021: 1, T0082: 1, H0036: 1, H0253: 1, S0010: 1, T0048: 1, S0182: 1, S0474: 1, H0263: 1, T0110: 1, L0040: 1, H0327: 1, L0471: 1, H0010: 1, H0024: 1, H0015: 1, H0416: 1, H0290: 1, H0292: 1, S0003: 1, L0483: 1, H0030: 1, H0553: 1, H0674: 1, S0364: 1, S0366: 1, H0059: 1, S0038: 1, L0564: 1, T0042: 1, H0494: 1, S0016: 1, H0560: 1, H0641: 1, H0646: 1, S0426: 1, L0371: 1, L0770: 1, L0761: 1, L0667: 1, L0772: 1, L0372: 1, L0646: 1, L0642: 1, L0374: 1, L0766: 1, L0651: 1, L0378: 1, L0776: 1, L0655: 1, L0511: 1, L0656: 1, L0636: 1, L0382: 1, L0664: 1, H0698: 1, H0702: 1, H0723: 1, H0520: 1, H0547: 1,
--

HPDQ155	HPDQ155R	1848	1 - 441	4023		H0519: 1, H0711: 1, H0659: 1, H0658: 1, H0666: 1, H0648: 1, H0672: 1, S0378: 1, L0602: 1, H0518: 1, H0522: 1, S0406: 1, H0555: 1, H0187: 1, S0027: 1, S0032: 1, L0742: 1, L0754: 1, L0747: 1, L0780: 1, L0757: 1, L0759: 1, S0031: 1, S0436: 1, L0592: 1, L0581: 1, L0608: 1, L0593: 1, L0362: 1, L0366: 1, H0667: 1, H0542: 1, H0422: 1 and H0352: 1, L0779: 5, L0803: 4, H0170: 3, L0663: 3, L0777: 3, H0687: 2, H0328: 2, H0038: 2, L0521: 2, L0809: 2, L0759: 2, L0589: 2, H0171: 1, S0046: 1, S0300: 1, L0717: 1, H0369: 1, H0550: 1, S0222: 1, H0586: 1, H0574: 1, H0042: 1, S0010: 1, H0544: 1, H0620: 1, H0014: 1,		
---------	----------	------	---------	------	--	---	--	--

HPDQL70	HPDQL70R	1849	2 - 646	4024			H0373: 1, H0510: 1, S0003: 1, H0644: 1, H0316: 1, S0036: 1, H0063: 1, H0264: 1, H0509: 1, L0762: 1, L0662: 1, L0794: 1, L0649: 1, L0659: 1, L0518: 1, L0783: 1, L0789: 1, H0144: 1, H0547: 1, H0659: 1, H0658: 1, S0328: 1, H0696: 1, L0747: 1, L0780: 1, L0731: 1, L0588: 1, L0591: 1, L0599: 1 and L0595: 1.		
HPDQL55	HPDQL55R	1850	256 - 711	4025	Pro-5 to Arg-25, Lys-32 to Ser-39, Pro-63 to Pro-79, Pro-115 to His-121.		L0774: 3, L0809: 2, H0483: 1, H0306: 1, H0599: 1, H0618: 1, H0083: 1, H0644: 1, H0617: 1, H0606: 1, H0087: 1, L0369: 1, L0763: 1, L0643: 1, L0662: 1, L0794: 1, L0804: 1, L0790: 1, L0665: 1, H0658: 1, H0696: 1, L0748: 1, L0780: 1 and L0757: 1.		
HPDQR20	HPDQR20R	1851	1 - 639	4026			L0777: 21, L0748: 16, L0439: 12, S0360: 9,		

L0659: 9, L0666: 9, L0803: 8, L0662: 7, L0747: 7, L0794: 6, L0663: 5, S0406: 5, L0770: 4, L0731: 4, L0758: 4, S0026: 4, S0356: 3, L0717: 3, H0156: 3, L0769: 3, L0809: 3, L0664: 3, H0520: 3, H0672: 3, H0521: 3, H0696: 3, L0750: 3, S0192: 3, H0542: 3, H0423: 3, H0624: 2, H0657: 2, S0420: 2, S0358: 2, S0376: 2, S0408: 2, H0013: 2, S0003: 2, S0214: 2, H0264: 2, H0412: 2, H0413: 2, S0440: 2, L0764: 2, L0766: 2, L0804: 2, L0774: 2, L0775: 2, L0806: 2, L0655: 2, L0665: 2, S0374: 2, L0438: 2, H0547: 2, H0519: 2, H0689: 2, H0660: 2, S0380: 2, H0522: 2, S0206: 2, L0749: 2, L0752: 2, L0759: 2, L0361: 2,						
--	--	--	--	--	--	--

S0242: 2, H0170: 1, H0171: 1, L0448: 1, H0685: 1, H0716: 1, S0114: 1, H0656: 1, L0785: 1, S0400: 1, S0442: 1, S0444: 1, S0300: 1, S0222: 1, H0431: 1, H0586: 1, H0632: 1, L0623: 1, H0069: 1, H0036: 1, H0581: 1, H0309: 1, H0263: 1, H0327: 1, H0545: 1, H0150: 1, L0471: 1, H0024: 1, H0014: 1, T0010: 1, H0083: 1, H0252: 1, H0615: 1, H0688: 1, H0622: 1, L0483: 1, H0068: 1, S0366: 1, H0598: 1, H0163: 1, H0090: 1, H0040: 1, T0067: 1, H0623: 1, T0069: 1, H0494: 1, S0372: 1, S0448: 1, H0714: 1, H0641: 1, S0142: 1, S0210: 1, L0369: 1, L0646: 1, L0641: 1, L0771: 1, L0387: 1, L0651: 1, L0378: 1, L0653: 1,							
--	--	--	--	--	--	--	--

HPDQR88	HPDQR88R	1852	2 - 550	4027	Gln-121 to Glu-136, Ala-153 to Ser-162, Ala-176 to Ser-182.	L0542: 1, L0647: 1, L0787: 1, H0658: 1, H0670: 1, H0648: 1, H0539: 1, H0710: 1, S0332: 1, H0478: 1, H0627: 1, L0755: 1, S0436: 1, L0605: 1, L0362: 1, H0667: 1, S0276: 1, H0543: 1, H0422: 1, H0506: 1 and H0352: 1.		
HPDQS14	HPDQS14R	1853	113 - 325	4028				
HPDQS25	HPDQS25R	1854	25 - 273	4029				
HPDQS63	HPDQS63R	1855	25 - 258	4030	Phe-25 to Arg-34, Cys-51 to His-56, Glu-66 to Ser-75.			
HPDQS66	HPDQS66R	1856	134 - 322	4031		H0658: 2, L0745: 2, S0422: 1, H0648: 1 and L0731: 1.		
HPDQS76	HPDQS76R	1857	41 - 175	4032	His-2 to Trp-13, Lys-22 to Cys-31.	L0748: 9, L0774: 3, H0331: 2, H0632: 2, L0526: 2, H0658: 2, L0581: 2, H0574: 1 and L0790: 1.		
HPDQT32	HPDQT32R	1858	3 - 410	4033	Gly-17 to Glu-26, Lys-32 to Leu-37, Phe-46 to Thr-52.	H0542: 1, H0265: 7, H0543: 7, L0751: 5, S0424: 5, H0556: 4.		

H0208: 1, S0132: 1, S0278: 1, S0005: 1, H0497: 1, H0156: 1, L0021: 1, H0318: 1, H0052: 1, T0103: 1, H0544: 1, H0178: 1, H0172: 1, S0051: 1, H0083: 1, H0355: 1, H0510: 1, H0594: 1, H0188: 1, H0687: 1, H0622: 1, L0194: 1, L0483: 1, T0006: 1, H0033: 1, H0424: 1, H0031: 1, H0606: 1, H0166: 1, H0674: 1, H0591: 1, H0063: 1, H0087: 1, T0067: 1, L0351: 1, H0494: 1, H0561: 1, S0352: 1, S0440: 1, H0633: 1, H0647: 1, S0144: 1, S0344: 1, S0426: 1, H0529: 1, L0369: 1, L0372: 1, L0646: 1, L0800: 1, L0662: 1, L0768: 1, L0766: 1, L0650: 1, L0376: 1, L0776: 1, L0657: 1, L0636: 1, L0542: 1, L0783: 1, L0787: 1,							
--	--	--	--	--	--	--	--

HPDQU81	HPDQU81R	1859					L0666: 1, L0664: 1, L0665: 1, H0593: 1, H0684: 1, H0435: 1, H0659: 1, S0328: 1, S0330: 1, H0539: 1, S0378: 1, H0521: 1, H0555: 1, H0631: 1, L0744: 1, L0750: 1, L0777: 1, L0752: 1, L0757: 1, L0758: 1, L0596: 1, L0485: 1, L0593: 1, L0601: 1, S0011: 1, S0026: 1, S0192: 1 and H0352: 1.		
							L0731: 4, L0775: 3, L0740: 3, H0170: 2, S0426: 2, L0770: 2, L0646: 2, L0766: 2, L0754: 2, H0344: 1, H0295: 1, H0393: 1, H0592: 1, H0318: 1, S6028: 1, H0038: 1, H0551: 1, L0642: 1, L0803: 1, L0774: 1, L0776: 1, L0663: 1, H0658: 1, S0332: 1, L0748: 1, L0777: 1, L0752: 1, L0757: 1, H0445: 1, S0424: 1 and S0384: 1.		

HPDQV07	HPDQV07R	1860	2 - 421	4035				
HPDQV49	HPDQV49R	1861	246 - 401	4036				
HPDQW39	HPDQW39R	1862	68 - 550	4037	Asn-20 to Asp-25, Met-75 to Asp-81, Arg-144 to Thr-152, 4, AR055: 2, AR061: 1	AR104: 42, AR089: 22, AR060: 7, AR096: 1		
HPDQX13	HPDQX13R	1863	113 - 391	4038	Lys-1 to Leu-23, Ala-27 to Ser-34, Gly-36 to Phe-44.			
HPDQY23	HPDQY23R	1864	3 - 476	4039				
HPDQY65	HPDQY65R	1865	3 - 437	4040				
HPDQY88	HPDQY88R	1866	164 - 340	4041				
HPDQY95	HPDQY95R	1867	29 - 430	4042	Leu-11 to Cys-24, Leu-30 to Ser-36, Gly-93 to Glu-99.			
HPDQZ30	HPDQZ30R	1868	212 - 538	4043				
HPDQZ65	HPDQZ65R	1869	3 - 506	4044	Ser-120 to Tyr-126, Gly-137 to Arg-142, Ser-160 to Ser-168.			
HPDRA44	HPDRA44R	1870	1 - 525	4045				
HPDRA50	HPDRA50R	1871	1 - 384	4046				
HPDRF65	HPDRF65R	1872	230 - 559	4047	Glu-1 to Pro-9.			
HPDRG34	HPDRG34R	1873	79 - 270	4048		H0031: 2, H0135: 1, H0272: 1 and H0658: 1.		
HPDRG73	HPDRG73R	1874	2 - 481	4049	Ala-2 to Gly-8.			
HPDRM77	HPDRM77R	1875	1 - 177	4050				
HPDRM93	HPDRM93R	1876	3 - 302	4051				
HPDRO04	HPDRO04R	1877	2 - 307	4052	Gly-1 to Cys-24,			

HPDR064	HPDR064R	1878	249 - 509	4053	Cys-27 to Gly-43, Ala-46 to Trp-54, Ala-56 to Arg-68, Phe-83 to Arg-93. Thr-4 to His-17, Ser-21 to Gln-27.	S0132: 1, H0156: 1, H0575: 1, H0551: 1, H0638: 1, H0670: 1, H0555: 1 and L0439: 1. L0766: 11, L0752: 7, L0754: 5, H0547: 4, S0358: 3, S0022: 3, L0756: 3, L0771: 3, H0625: 2, L0065: 2, S0438: 2, L0805: 2, L0776: 2, H0658: 2, S0328: 2, L0740: 2, L0745: 2, L0747: 2, L0750: 2, L0731: 2, L0601: 2, H0542: 2, H0543: 2, H0423: 2, S0424: 2, H0341: 1, H0661: 1, H0664: 1, H0306: 1, H0402: 1, H0638: 1, S0360: 1, H0580: 1, H0645: 1, H0443: 1, H0357: 1, H0592: 1, H0587: 1, H0574: 1, H0486: 1, H0270: 1, H0156: 1, T0048: 1, H0052: 1,
HPDRP36	HPDRP36R	1879	3 - 323	4054	Thr-57 to Phe-62, Gly-68 to Phe-73, His-86 to Tyr-92, Asp-97 to Phe-103.	

HPDRP41	HPDRP41R	1880	2 - 622	4055	Gly-8 to Val-14, Gln-20 to Asp-27, Met-79 to His-88, Arg-171 to Tyr-183, Pro-198 to Gly-204.	H0375: 1, H0687: 1, H0328: 1, H0169: 1, H0598: 1, H0651: 1, H0413: 1, T0042: 1, H0561: 1, S0422: 1, H0529: 1, L0520: 1, L0536: 1, L0772: 1, L0649: 1, L0803: 1, L0809: 1, L0666: 1, L0665: 1, H0144: 1, H0520: 1, H0519: 1, H0659: 1, H0651: 1, S0380: 1, H0696: 1, S0404: 1, S0406: 1, H0555: 1, L0744: 1, L0749: 1, L0753: 1, L0757: 1, L0759: 1, H0445: 1, S0434: 1, S0436: 1, L0599: 1, L0608: 1, L0594: 1 and H0422: 1.		
HPDRQ66	HPDRQ66R	1881	27 - 290	4056		L0748: 3, H0556: 2, S0420: 2, S0045: 2, H0171: 1, H0265: 1, S0134: 1, H0657: 1,		

HPDRQ84	HPDRQ84R	1882	1 - 441	4057	Gly-6 to Ser-16, Glu-19 to Ala-33, Glu-44 to Lys-60, Ile-135 to Lys-147.	H0341: 1, S0110: 1, H0661: 1, H0305: 1, H0580: 1, S0007: 1, S0046: 1, S0132: 1, S0278: 1, H0257: 1, H0069: 1, H0575: 1, T0048: 1, H0327: 1, H0252: 1, H0634: 1, H0412: 1, H0059: 1, H0633: 1, S0344: 1, H0529: 1, L0521: 1, L0806: 1, L0805: 1, H0435: 1, H0658: 1, H0672: 1, S0378: 1, L0747: 1, L0599: 1, S0026: 1 and H0542: 1.			
HPDRR71	HPDRR71R	1883	1 - 543	4058	Ala-3 to Lys-11, Gly-112 to Glu-117.				
HPDRS43	HPDRS43R	1884	59 - 211	4059	Lys-94 to Ser-100.				
HPDRS46	HPDRS46R	1885	3 - 332	4060	Lys-32 to Glu-38, Ser-44 to Ser-55,				
HPDRS87	HPDRS87R	1886	2 - 508	4061	Gln-67 to Gly-78, Glu-85 to Glu-90, Gly-108 to Ser-114, Phe-149 to Lys-158.				

HPDRT36	HPDRT36R	1887	59 - 214	4062	Lys-25 to Arg-36.	L0754: 19, L0731: 18, H0521: 15, L0777: 11, L0766: 8, L0755: 7, H0581: 6, L0659: 6, L0751: 6, H0486: 5, H0266: 5, H0553: 5, L0662: 5, L0663: 5, H0144: 5, L0439: 5, S0276: 5, H0638: 4, S0360: 4, H0644: 4, S0374: 4, S0330: 4, L0740: 4, L0756: 4, L0599: 4, L0362: 4, H0423: 4, H0657: 3, H0663: 3, H0580: 3, H0575: 3, S0003: 3, H0622: 3, H0124: 3, H0264: 3, H0623: 3, S0002: 3, L0520: 3, L0764: 3, L0775: 3, L0655: 3, L0519: 3, H0519: 3, H0659: 3, H0658: 3, S0328: 3, L0744: 3, L0747: 3, L0759: 3, S0026: 3, S0194: 3, H0624: 2, H0656: 2, H0341: 2, S0354: 2, S0408: 2, S0046: 2, H0619: 2, H0013: 2, H0250: 2,		
---------	----------	------	----------	------	-------------------	--	--	--

H0545: 2, L0471: 2, H0428: 2, L0142: 2, H0551: 2, T0067: 2, H0561: 2, H0641: 2, S0210: 2, L0772: 2, L0771: 2, L0794: 2, L0803: 2, L0661: 2, L0544: 2, L0793: 2, L0666: 2, L0665: 2, S0216: 2, L0565: 2, H0648: 2, S0152: 2, H0522: 2, H0555: 2, H0345: 2, S0027: 2, L0750: 2, L0779: 2, L0752: 2, L0758: 2, H0445: 2, S0434: 2, L0591: 2, L0594: 2, H0653: 2, H0422: 2, H0159: 1, S0134: 1, H0583: 1, H0650: 1, S0212: 1, H0661: 1, H0662: 1, H0402: 1, S0358: 1, S0444: 1, T0008: 1, S0045: 1, S0132: 1, H0411: 1, H0369: 1, H0370: 1, T0039: 1, T0060: 1, H0042: 1, H0590: 1, T0048: 1, H0318: 1, H0596: 1, L0738: 1,
--

H0046: 1, L0157: 1, H0565: 1, H0024: 1, S0388: 1, H0267: 1, S0250: 1, S0214: 1, H0328: 1, H0030: 1, H0383: 1, H0673: 1, H0169: 1, H0316: 1, H0163: 1, H0090: 1, H0591: 1, H0040: 1, H0634: 1, H0488: 1, H0268: 1, H0412: 1, H0413: 1, H0056: 1, L0435: 1, H0494: 1, S0370: 1, H0646: 1, H0652: 1, S0344: 1, S0426: 1, L0371: 1, L0646: 1, L0800: 1, L0765: 1, L0648: 1, L0768: 1, L0389: 1, L0552: 1, L0774: 1, L0805: 1, L0653: 1, L0776: 1, L0658: 1, L0542: 1, L0809: 1, L0647: 1, H0701: 1, H0691: 1, S0126: 1, H0711: 1, H0683: 1, H0518: 1, S0454: 1, S0013: 1, H0479: 1, S0206: 1, L0743: 1, S0260: 1, H0343: 1,
--

HPDRT37	HPDRT37R	1888	3 - 560	4063	Ala-2 to Asp-9, Arg-18 to Gly-26, Asn-34 to Arg-43, Ala-52 to Asp-57, Leu-48 to Lys-63.	L0584: 1, H0542: 1 and S0412: 1.		
HPDRT38	HPDRT38R	1889	2 - 196	4064				
HPDRU03	HPDRU03R	1890	2 - 334	4065				
HPDRU37	HPDRU37R	1891	1 - 297	4066	Glu-11 to Pro-16, Arg-46 to Tyr-56, Asp-63 to Asp-69.			
HPDRU71	HPDRU71R	1892	458 - 703	4067				
HPDRV73	HPDRV73R	1893	1 - 528	4068	Glu-54 to Val-64, Leu-97 to Leu-105.			
HPDRV79	HPDRV79R	1894	300 - 596	4069	Ser-14 to Gly-20.	L0794: 6, L0758: 6, L0747: 5, L0770: 4, L0809: 4, H0620: 3, L0764: 3, H0658: 3, H0618: 2, H0012: 2, H0135: 2, L0769: 2, L0771: 2, L0773: 2, L0662: 2, L0803: 2, L0532: 2, S0126: 2, L0756: 2, S0624: 1, S0282: 1, H0638: 1, S0420: 1, L0717: 1, S0222: 1, H0441: 1, H0333: 1, L0622: 1, H0309: 1, H0597: 1, S0388: 1, S0051: 1,		

HPDRW09	HPDRW09R	1895	1 - 231	4070	Ala-31 to Gln-37, Lys-63 to Ser-69.	T0010: 1, H0271: 1, H0687: 1, L0483: 1, H0604: 1, H0030: 1, H0181: 1, H0617: 1, H0412: 1, L0667: 1, L0646: 1, L0800: 1, L0643: 1, L0374: 1, L0364: 1, L0766: 1, L0649: 1, L0804: 1, L0523: 1, L0805: 1, L0655: 1, L0607: 1, L0657: 1, L0559: 1, L0659: 1, L0517: 1, L0529: 1, L0647: 1, L0787: 1, L0789: 1, L0666: 1, L0663: 1, L0665: 1, T0068: 1, L0438: 1, H0670: 1, H0627: 1, L0748: 1, L0439: 1, L0751: 1, L0777: 1, L0731: 1, L0757: 1, S0031: 1, L0605: 1, H0542: 1, H0543: 1, H0423: 1, L0697: 1 and S0462: 1.		
HPDRW51	HPDRW51R	1896	192 - 587	4071				
HPDRY37	HPDRY37R	1897	2 - 322	4072	Pro-3 to Gly-8, Pro-70 to Pro-85.			

HPDRZ11	HPDRZ11R	1898	1 - 354	4073	Arg-13 to Gly-26, Asn-35 to Gln-40.	H0457: 9, L0766: 7, H0046: 5, H0650: 4, H0634: 3, L0659: 3, L0439: 3, H0716: 2, H0656: 2, H0254: 2, H0255: 2, H0333: 2, H0253: 2, H0081: 2, H0083: 2, H0628: 2, L0761: 2, L0800: 2, H0638: 2, L0750: 2, H0543: 2, H0422: 2, H0265: 1, H0657: 1, S0001: 1, S0420: 1, S0354: 1, S0376: 1, S0360: 1, H0722: 1, S0045: 1, H0550: 1, S0222: 1, H0614: 1, H0613: 1, H0069: 1, H0427: 1, H0575: 1, H0318: 1, H0581: 1, H0052: 1, H0327: 1, H0545: 1, H0041: 1, H0050: 1, H0354: 1, H0266: 1, H0179: 1, H0428: 1, H0622: 1, S0366: 1, S0036: 1, H0087: 1, H0264: 1, H0488: 1, L0435: 1,
HPDRZ29	HPDRZ29R	1899	3 - 509	4074	Val-30 to Trp-36, Ala-53 to Gln-67.	

HPDVA01	HPDVA01R	1900	774 - 484	4075			H0022: 1, T0041: 1, H0560: 1, S0142: 1, S0426: 1, H0695: 1, H0529: 1, L0644: 1, L0764: 1, L0662: 1, L0649: 1, L0375: 1, L0805: 1, L0658: 1, L0809: 1, L0789: 1, L0792: 1, L0532: 1, L0663: 1, L0664: 1, L0665: 1, H0670: 1, H0672: 1, S0330: 1, H0539: 1, H0518: 1, H0521: 1, S0406: 1, H0555: 1, H0436: 1, S3012: 1, S3014: 1, S0027: 1, S0028: 1, L0744: 1, L0749: 1, L0756: 1, H0445: 1, S0434: 1, H0136: 1, S0276: 1 and H0542: 1.		
HPDVA06	HPDVA06R	1901	243 - 380	4076					
HPDVB37	HPDVB37R	1902	40 - 315	4077	Pro-2 to Lys-18.		L0748: 10, L0803: 3, L0439: 3, L0751: 3, L0626: 2, L0809: 2, L0790: 2, H0658: 2, L0744: 2, L0740: 2, L0754: 2, L0747: 2, L0756: 2, L0752: 2,		

						L0758: 2, H0170: 1, H0645: 1, H0351: 1, H0370: 1, H0497: 1, S0388: 1, T0067: 1, L0772: 1, L0643: 1, L0662: 1, L0794: 1, L0804: 1, L0774: 1, L0776: 1, L0666: 1, L0663: 1, L0665: 1, L0438: 1, S0044: 1, L0745: 1, L0749: 1, L0755: 1, L0757: 1 and S0031: 1.			
HPDV/B70	HPDV/B70R	1903	2 - 778	4078					
HPDV/C28	HPDV/C28R	1904	50 - 136	4079					
HPDV/E55	HPDV/E55R	1905	89 - 220	4080	Pro-8 to Pro-13.				
HPDV/G06	HPDV/G06R	1906	3 - 326	4081	Gln-22 to Val-33, Pro-37 to Gly-45, Ser-56 to Thr-65, Arg-82 to Thr-92.				
HPDV/G67	HPDV/G67R	1907	193 - 450	4082	Gln-79 to Gln-86.				
HPDV/I25	HPDV/I25R	1908	1 - 510	4083	Met-32 to Lys-37, Asp-44 to Ala-60.				
HPDV/I95	HPDV/I95R	1909	3 - 338	4084	Ala-32 to Thr-42, Lys-55 to Phe-60, Asp-85 to Gly-90, Arg-95 to Thr-100.				
HPDV/K74	HPDV/K74R	1910	3 - 425	4085	Ile-20 to Gly-29, Asn-82 to Thr-87.				

HPDVK79	HPDVK79R	1911	61 - 597	4086	Arg-8 to Lys-13, Gly-35 to Lys-42, Ala-48 to Lys-54.			
HPDVK93	HPDVK93R	1912	2 - 697	4087				
HPDVL36	HPDVL36R	1913	8 - 265	4088				
HPDVL45	HPDVL45R	1914	1 - 303	4089	Gly-1 to Phe-8, Pro-39 to Thr-61, Pro-66 to Phe-71, Arg-84 to Pro-89.	H0656: 3, S0218: 1, S0116: 1, S0356: 1, H0586: 1, H0333: 1, H0486: 1, H0427: 1, S0280: 1, H0545: 1, H0135: 1, H0087: 1, H0695: 1, H0547: 1, H0435: 1, H0658: 1, H0670: 1, H0672: 1, H0521: 1, L0439: 1, H0543: 1 and H0423: 1.		
HPDVL52	HPDVL52R	1915	60 - 350	4090	Ala-5 to Val-11, Leu-15 to Lys-23, Lys-39 to Ile-44.	H0656: 1, S0116: 1, S0376: 1, T0110: 1, T0042: 1, H0494: 1, L0649: 1, L0774: 1, L0665: 1, H0658: 1, L0748: 1, L0757: 1, H0667: 1 and H0543: 1.		
HPDVM61	HPDVM61R	1916	101 - 364	4091	Lys-13 to Leu-24, Arg-31 to Pro-54.			
HPDVM63	HPDVM63R	1917	1 - 576	4092	Ala-34 to Thr-46, Asp-59 to Lys-73, Ala-86 to Gln-94, Pro-99 to Gln-109, Glu-129 to Thr-141.			

HPDVM86	HPDVM86R	1918	2-406	4093	Asp-160 to Asn-168. Ala-33 to Cys-41, Thr-58 to Pro-66.	H0521: 43, S0278: 39, H0144: 30, S0142: 26, H0522: 18, S0344: 15, S0002: 14, H0638: 13, H0580: 11, H0641: 10, L0755: 10, L0599: 10, H0250: 9, H0271: 8, H0622: 8, H0575: 7, S0426: 7, L0775: 7, L0776: 7, L0751: 7, L0754: 7, H0125: 6, S0376: 6, S0132: 6, H0069: 6, H0090: 6, S0360: 5, H0486: 5, S0022: 5, L0731: 5, H0584: 4, H0657: 4, S0354: 4, S0358: 4, S0140: 4, H0581: 4, H0674: 4, L0764: 4, L0657: 4, L0665: 4, S0052: 4, S0428: 4, L0749: 4, L0752: 4, H0445: 4, L0591: 4, H0656: 3, L0785: 3, H0663: 3, H0370: 3, H0042: 3, H0004: 3, H0318: 3, H0031: 3, H0059: 3, L0769: 3,		
---------	----------	------	-------	------	---	--	--	--

L0372: 3, L0646: 3, L0806: 3, L0639: 3, L0666: 3, S0126: 3, H0658: 3, H0518: 3, H0555: 3, L0750: 3, H0255: 2, H0662: 2, H0637: 2, H0431: 2, H0574: 2, H0632: 2, H0545: 2, H0083: 2, S0214: 2, H0644: 2, H0032: 2, H0634: 2, S0440: 2, H0652: 2, L0770: 2, L0637: 2, L0771: 2, L0653: 2, L0783: 2, L0664: 2, H0660: 2, H0134: 2, H0187: 2, S3014: 2, L0748: 2, L0777: 2, L0758: 2, S0434: 2, L0595: 2, L0601: 2, H0167: 1, H0159: 1, S0342: 1, S0114: 1, S0134: 1, H0650: 1, H0661: 1, H0664: 1, H0306: 1, H0402: 1, H0192: 1, S0418: 1, H0645: 1, H0393: 1, H0537: 1, T0104: 1, H0586: 1, H0497: 1, H0331: 1, H0101: 1,
--

H0635: 1, H0427: 1, H0309: 1, H0231: 1, H0544: 1, H0546: 1, H0046: 1, H0012: 1, H0620: 1, H0024: 1, H0107: 1, H0179: 1, H0416: 1, H0188: 1, S0003: 1, H0688: 1, H0029: 1, H0553: 1, L0142: 1, H0628: 1, L0055: 1, H0383: 1, H0673: 1, H0189: 1, H0124: 1, H0068: 1, H0063: 1, H0087: 1, S0472: 1, L0369: 1, L0762: 1, L0761: 1, L0772: 1, L0773: 1, L0662: 1, L0767: 1, L0387: 1, L0766: 1, L0649: 1, L0533: 1, L0522: 1, L0774: 1, L0784: 1, L0652: 1, L0655: 1, L0379: 1, L0629: 1, L0544: 1, L0367: 1, L0368: 1, L0787: 1, L0788: 1, S0053: 1, S0216: 1, S0374: 1, S0296: 1, H0682: 1, H0684: 1, S0328: 1, S0332: 1,
--

HPDVQ67	HPDVQ67R	1919	1 - 465	4094	Glu-1 to Asp-6, Thr-11 to Glu-20, Val-61 to Gln-66.	H0214: 1, S0404: 1, H0576: 1, L0779: 1, L0780: 1, L0757: 1, L0593: 1, S0011: 1, H0665: 1, H0542: 1, H0423: 1 and S0458: 1.		
						AR039: 4, AR096: 4, AR052: 2, AR089: 2, AR061: 2, AR060: 2, AR104: 2, AR033: 1, AR055: 1, AR053: 0 L0666: 4, H0253: 2, H0622: 2, H0670: 2, L0743: 2, H0181: 1, L0372: 1, L0773: 1, L0767: 1, L0657: 1, L0665: 1, H0658: 1, L0751: 1, L0749: 1, L0779: 1, L0777: 1, L0758: 1 and L0593: 1.		
HPDVQ74	HPDVQ74R	1920	3 - 278	4095	Pro-1 to Ala-9, Arg-17 to Glu-25.	H0658: 2		
HPDVQ82	HPDVQ82R	1921	29 - 421	4096		L0754: 2, H0685: 1, T0010: 1, H0658: 1 and H0423: 1.		
HPDVT30	HPDVT30R	1922	3 - 284	4097				
HPDVT37	HPDVT37R	1923	1 - 333	4098	Val-1 to Glu-9,			
HPDVU28	HPDVU28R	1924	91 - 693	4099	Pro-26 to Gly-31, Tyr-67 to Glu-74,			

HPDVU72	HPDVU72R	1925	3 - 548	4100	<p>Phe-107 to Glu-118, Lys-162 to Arg-173, Ser-1 to His-7, Thr-15 to Arg-29, His-31 to Val-42, Pro-52 to Pro-94, Glu-113 to Ala-131, Lys-161 to Arg-167,</p>	<p>L0777: 6, L0766: 5, L0749: 5, L0601: 4, L0758: 3, H0617: 2, L0769: 2, L0794: 2, L0805: 2, L0657: 2, L0665: 2, H0693: 2, S0028: 2, L0439: 2, L0751: 2, L0747: 2, L0779: 2, L0588: 2, S0114: 1, H0650: 1, H0657: 1, H0402: 1, H0638: 1, S0354: 1, S0360: 1, S0045: 1, S6026: 1, H0550: 1, H0156: 1, H0253: 1, H0421: 1, T0115: 1, H0150: 1, H0014: 1, S0051: 1, S6028: 1, H0688: 1, L0483: 1, H0181: 1, H0163: 1, H0090: 1, H0087: 1, H0560: 1, H0646: 1, S0210: 1, L0763: 1, L0638: 1, L0761: 1, L0784: 1, L0806: 1, L0776: 1, L0655: 1, L0659: 1, L0384: 1, L0789: 1, H0690: 1,</p>		
---------	----------	------	---------	------	--	--	--	--

							H0684: 1, H0658: 1, L0752: 1, L0755: 1, L0731: 1, L0757: 1, L0595: 1, S0276: 1 and H0506: 1.			
HPDVU88	HPDVU88R	1926	3 - 191	4101	Pro-6 to Ala-16.					
HPDVV78	HPDVV78R	1927	78 - 644	4102						
HPDWA35	HPDWA35R	1928	3 - 302	4103			H0658: 2			
HPDWA88	HPDWA88R	1929	3 - 560	4104						
HPDWB40	HPDWB40R	1930	175 - 306	4105	Arg-1 to Glu-8, Ala-31 to Trp-39.					
HPDWC30	HPDWC30R	1931	231 - 383	4106						
HPDWC75	HPDWC75R	1932	1 - 390	4107	Ala-3 to Ala-10, Pro-15 to Pro-23, Glu-79 to Ser-88, Pro-115 to Arg-122.					
HPDWD44	HPDWD44R	1933	214 - 471	4108			H0271: 13, H0436: 11, L0766: 8, H0581: 5, L0754: 5, S0242: 5, H0556: 4, H0635: 4, L0800: 4, L0662: 4, L0804: 4, L0655: 4, L0659: 4, L0789: 4, L0751: 4, L0757: 4, L0591: 4, S0356: 3, H0069: 3, H0416: 3, L0803: 3, L0747: 3, H0445: 3, H0423: 3, H0422: 3, H0395: 2,			

S0134: 2, H0662: 2, H0402: 2, S0354: 2, S0046: 2, S0132: 2, H0587: 2, H0642: 2, H0014: 2, H0179: 2, H0644: 2, H0032: 2, H0090: 2, H0396: 2, H0633: 2, S0422: 2, L0375: 2, L0806: 2, L0607: 2, L0666: 2, L0663: 2, S0052: 2, S0053: 2, S0216: 2, H0521: 2, L0740: 2, L0779: 2, L0777: 2, L0758: 2, L0596: 2, L0599: 2, H0394: 1, S0114: 1, H0657: 1, H0656: 1, S0298: 1, H0306: 1, S0376: 1, H0411: 1, H0607: 1, H0632: 1, H0257: 1, H0492: 1, H0486: 1, L0021: 1, H0318: 1, H0196: 1, H0545: 1, H0457: 1, H0083: 1, S6028: 1, L0483: 1, H0591: 1, H0634: 1, H0623: 1, H0560: 1, H0641: 1, S0344: 1, L0770: 1, L0372: 1,						
--	--	--	--	--	--	--

HPDWD67	HPDWD67R	1934	220 - 2	4109	Asp-65 to Gly-73.	L0646: 1, L0794: 1, L0774: 1, L0653: 1, L0776: 1, L0657: 1, L0783: 1, L0664: 1, L0665: 1, S0428: 1, S0374: 1, H0689: 1, H0690: 1, H0658: 1, H0672: 1, S0378: 1, H0518: 1, H0576: 1, H0478: 1, S014: 1, L0749: 1, H0543: 1 and S0458: 1.		
HPDWD69	HPDWD69R	1935	3 - 353	4110	Ser-1 to His-19, Val-86 to Pro-105, Pro-110 to Met-117.	L0588: 18, S0408: 16, S0007: 12, S0444: 11, H0677: 11, H0648: 10, L0769: 9, H0670: 9, S0328: 9, H0651: 8, S0406: 8, H0657: 7, H0341: 7, H0402: 7, H0659: 7, L0748: 7, H0543: 7, T0049: 6, H0251: 6, L0775: 6, L0742: 6, H0422: 6, L0471: 5, H0617: 5, S0440: 5, L0517: 5, S0374: 5, H0658: 5, H0696: 5, L0749: 5, H0423: 5, H0295: 4, S0114: 4, S0134: 4,		

H0656: 4, H0639: 4, H0687: 4, H0606: 4, L0767: 4, L0518: 4, L5286: 4, H0682: 4, L0752: 4, L0759: 4, L0605: 4, L0361: 4, H0685: 3, H0294: 3, H0305: 3, S0356: 3, S0358: 3, S0360: 3, H0722: 3, S0046: 3, L0622: 3, H0486: 3, T0109: 3, T0003: 3, T0067: 3, H0412: 3, S0438: 3, S0422: 3, L0520: 3, L0371: 3, L0770: 3, L0768: 3, L0766: 3, L5574: 3, L0376: 3, L0776: 3, S0126: 3, H0689: 3, L0740: 3, L0758: 3, H0542: 3, H0352: 3, T0002: 2, H0159: 2, S0040: 2, H0713: 2, H0716: 2, S0218: 2, L0785: 2, H0661: 2, H0638: 2, H0125: 2, S0410: 2, H0351: 2, H0586: 2, H0587: 2, H0333: 2, H0492: 2, L0623: 2, S0182: 2,
--

H0581: 2, S0049: 2, H0083: 2, H0031: 2, H0163: 2, H0551: 2, H0059: 2, S0210: 2, L0762: 2, L0764: 2, L5564: 2, L0653: 2, L0655: 2, L0634: 2, L0526: 2, L0783: 2, L0543: 2, L0368: 2, H0691: 2, H0547: 2, H0690: 2, H0684: 2, S0330: 2, H0710: 2, L0754: 2, L0747: 2, L0750: 2, L0777: 2, L0755: 2, L0590: 2, L0581: 2, L0599: 2, L0608: 2, L0604: 2, L0362: 2, H0653: 2, H0721: 2, H0686: 1, S0430: 1, L0760: 1, S0116: 1, S0212: 1, H0484: 1, H0663: 1, H0306: 1, H0458: 1, H0459: 1, L0534: 1, L0005: 1, S0442: 1, S0376: 1, S0045: 1, S0132: 1, S0476: 1, H0393: 1, H0640: 1, H0411: 1, S0278: 1, H0455: 1, H0592: 1,							
--	--	--	--	--	--	--	--

<p> T0039: 1, T0060: 1, H0706: 1, S0010: 1, T0048: 1, H0318: 1, H0309: 1, H0596: 1, T0115: 1, L0040: 1, H0231: 1, H0546: 1, H0545: 1, H0009: 1, H0057: 1, H0018: 1, S0051: 1, H0510: 1, H0375: 1, H0109: 1, S0022: 1, H0328: 1, H0688: 1, H0039: 1, T0023: 1, T0006: 1, H0424: 1, H0628: 1, H0673: 1, H0708: 1, S0366: 1, S0036: 1, H0135: 1, H0040: 1, H0634: 1, H0063: 1, H0087: 1, H0116: 1, H0264: 1, H0413: 1, H0100: 1, L0564: 1, H0494: 1, H0561: 1, H0641: 1, H0646: 1, S0144: 1, S0344: 1, L0506: 1, L0761: 1, L0646: 1, L0771: 1, L0648: 1, L0521: 1, L0662: 1, L0387: 1, L0375: 1, L0806: 1, L0654: 1, L0661: 1, </p>

HPDWD81	HPDWD81R	1936	1 - 378	4111	Asn-60 to Gly-72, Pro-83 to Trp-114, Ser-117 to Arg-126.	L0807: 1, L0542: 1, L0519: 1, L0530: 1, L0790: 1, L0663: 1, H0144: 1, H0724: 1, H0660: 1, H0666: 1, H0672: 1, H0518: 1, H0521: 1, S0190: 1, H0134: 1, H0187: 1, H0436: 1, S0314: 1, S0028: 1, L0751: 1, L0779: 1, L0757: 1, S0031: 1, H0445: 1, S0436: 1, H0668: 1, S0026: 1, S0276: 1 and S0424: 1.		
HPDWE11	HPDWE11R	1937	2 - 121	4112	Arg-1 to Gln-9.	H0575: 2, L0002: 1, S0336: 1, H0487: 1, L0762: 1, L0637: 1, L0805: 1, L0659: 1, H0658: 1, L0777: 1 and L0731: 1.		
HPDWE64	HPDWE64R	1938	248 - 559	4113				
HPDWF93	HPDWF93R	1939	1 - 507	4114	Pro-3 to Pro-12.	H0038: 5, H0616: 3, L0752: 3, S0418: 2, H0620: 2, H0547: 2, L0602: 2, H0521: 2,		
HPDWE51	HPDWE51R	1940	169 - 342	4115	Phe-1 to Cys-13, Gly-28 to Ser-35.			

							L0751: 2, S0212: 1, S0282: 1, H0638: 1, S0358: 1, S0007: 1, H0261: 1, H0575: 1, S0346: 1, H0596: 1, L0471: 1, L0163: 1, H0071: 1, H0510: 1, S0003: 1, H0488: 1, S0038: 1, H0509: 1, H0649: 1, S0144: 1, L0803: 1, S0374: 1, H0519: 1, S0126: 1, H0658: 1, H0518: 1, S0013: 1, S0044: 1, L0743: 1, L0744: 1, L0748: 1, L0759: 1, L0599: 1 and S0424: 1.		

H0529: 3, L0761: 3, L0665: 3, H0144: 3, H0555: 3, S0026: 3, H0656: 2, H0341: 2, S0212: 2, S0418: 2, S0356: 2, H0675: 2, S0046: 2, H0411: 2, H0586: 2, H0581: 2, H0615: 2, H0553: 2, H0591: 2, S0440: 2, S0422: 2, L0772: 2, L0438: 2, H0711: 2, H0521: 2, S0404: 2, S3014: 2, L0743: 2, L0740: 2, H0170: 1, H0171: 1, H0159: 1, H0686: 1, S0342: 1, H0294: 1, S0114: 1, T0049: 1, S0116: 1, H0661: 1, H0458: 1, S0420: 1, S0376: 1, S0444: 1, H0437: 1, S6022: 1, H0550: 1, H0362: 1, H0642: 1, H0574: 1, H0559: 1, S0280: 1, H0590: 1, H0004: 1, H0363: 1, H0263: 1, H0596: 1, H0081: 1, H0014: 1, H0688: 1, H0628: 1,
--

							L0055: 1, H0673: 1, H0068: 1, H0551: 1, T0069: 1, L0435: 1, H0625: 1, S0002: 1, L0369: 1, L0637: 1, L0764: 1, L0774: 1, L0775: 1, L0375: 1, L0378: 1, L0806: 1, L0805: 1, L0655: 1, L0606: 1, L0657: 1, L0783: 1, L0382: 1, L0792: 1, H0701: 1, S0374: 1, H0519: 1, S0126: 1, H0658: 1, H0670: 1, H0648: 1, S0390: 1, S0037: 1, L0744: 1, L0747: 1, L0779: 1, L0731: 1, L0759: 1, H0445: 1, S0434: 1, L0584: 1, H0667: 1, S0194: 1, H0542: 1, H0543: 1, H0422: 1 and S0424: 1.			
HPDWN65	HPDWN65R	1944	1 - 246	4119						
HPDWN69	HPDWN69R	1945	2 - 607	4120	Gly-2 to Pro-9, Ser-24 to Thr-33.					
HPDWO08	HPDWO08R	1946	351 - 704	4121					L0766: 5, H0551: 3, L0769: 3, L0639: 3, H0327: 2, S0002: 2, L0764: 2, L0659: 2,	

										L0663: 2, L0777: 2, S0356: 1, S0360: 1, S0410: 1, L0717: 1, H0261: 1, H0550: 1, S0222: 1, T0109: 1, H0575: 1, T0048: 1, H0052: 1, S0051: 1, L0455: 1, H0124: 1, H0135: 1, H0063: 1, H0087: 1, L0763: 1, L0770: 1, L0796: 1, L0761: 1, L0643: 1, L0374: 1, L0771: 1, L0626: 1, L0635: 1, L0542: 1, L0809: 1, L0665: 1, L0565: 1, H0547: 1, H0658: 1, H0522: 1, L0756: 1, L0758: 1 and L0366: 1.					
HPDWO29	HPDWO29R	1947	386 - 568	4122		His-1 to Gly-13.									
HPDWO50	HPDWO50R	1948	27 - 455	4123		Arg-90 to Lys-95, Pro-121 to Trp-129.									
HPDWO61	HPDWO61R	1949	2 - 358	4124											
HPDWO82	HPDWO82R	1950	1 - 342	4125		Ala-3 to Glu-8.				L0770: 12, H0657: 10, H0659: 9, L0776: 8, H0648: 8, L0755: 8, L0774: 7, S0410: 6, H0494: 6, L0769: 6, L0750: 6, S0408: 5, S0440: 5, L0775: 5.					

<p> S0376: 4, S0360: 4, L0748: 4, L0777: 4, L0752: 4, L0759: 4, H0341: 3, S0358: 3, H0616: 3, L0766: 3, L0740: 3, L0747: 3, L0731: 3, L0758: 3, S0026: 3, H0170: 2, H0556: 2, H0685: 2, H0656: 2, S0420: 2, S0444: 2, T0109: 2, H0156: 2, H0545: 2, L0471: 2, H0031: 2, H0040: 2, H0560: 2, L0065: 2, S0438: 2, L0763: 2, L0772: 2, L0764: 2, L0518: 2, L0783: 2, H0144: 2, S0374: 2, H0520: 2, H0658: 2, H0670: 2, L0753: 2, H0445: 2, S0434: 2, H0665: 2, S0194: 2, S0134: 1, S0116: 1, H0663: 1, L0481: 1, H0638: 1, H0125: 1, S0442: 1, H0351: 1, H0369: 1, H0550: 1, H0431: 1, H0331: 1, H0069: 1, S0346: 1, T0048: 1, </p>

HPDW/S61	HPDW/S61R	1951	73 - 321	4126	Asp-15 to Val-20.	S0182: 1, S0049: 1, H0563: 1, H0081: 1, H0620: 1, H0014: 1, H0373: 1, H0083: 1, H0375: 1, H0428: 1, H0708: 1, H0634: 1, H0412: 1, H0413: 1, L0475: 1, H0386: 1, L0598: 1, H0529: 1, L0520: 1, L0762: 1, L0371: 1, L0638: 1, L0373: 1, L0646: 1, L0773: 1, L0521: 1, L0662: 1, L0805: 1, L0655: 1, L0517: 1, L0540: 1, L0542: 1, L0526: 1, L0809: 1, L0545: 1, L0791: 1, L0663: 1, L0665: 1, H0691: 1, H0547: 1, H0690: 1, H0435: 1, H0660: 1, H0651: 1, S0380: 1, S0406: 1, L0749: 1, L0780: 1, H0668: 1, H0653: 1, S0242: 1, S0276: 1, H0542: 1, H0422: 1 and H0506: 1.	
HPDW/S61	HPDW/S61R	1951	73 - 321	4126	Asp-15 to Val-20.	H0617: 8, S0404: 8, H0484: 7, H0550: 7,	

L0758: 5, H0606: 4, H0658: 4, H0696: 4, S0276: 4, H0295: 3, S0280: 3, H0150: 3, H0188: 3, H0163: 3, L0769: 3, S0408: 2, L0622: 2, L0623: 2, T0060: 2, T0006: 2, H0181: 2, H0673: 2, H0494: 2, L0764: 2, L0775: 2, L0776: 2, L0514: 2, L0510: 2, L0511: 2, L0512: 2, L0540: 2, L0783: 2, L0809: 2, L0528: 2, H0683: 2, H0694: 2, L0744: 2, L0747: 2, S0031: 2, S6024: 1, H0294: 1, H0381: 1, H0483: 1, H0664: 1, H0662: 1, S0356: 1, S0442: 1, S0358: 1, S0376: 1, H0411: 1, S6022: 1, H0586: 1, H0333: 1, H0036: 1, H0590: 1, H0309: 1, H0044: 1, H0121: 1, H0081: 1, H0014: 1, S0388: 1, S0051: 1, H0252: 1, H0622: 1,
--

HPDWT55	HPDWT55R	1952	3 - 503	4127	Ala-37 to Ser-42, Gly-127 to Thr-134.	L0483: 1, H0033: 1, H0111: 1, H0032: 1, H0166: 1, S0438: 1, L0762: 1, L0504: 1, L0381: 1, L0803: 1, L0375: 1, L0376: 1, L0509: 1, L0515: 1, L0518: 1, L0782: 1, L0544: 1, L0541: 1, L0543: 1, H0659: 1, S0126: 1, H0651: 1, L0743: 1, L0751: 1, L0777: 1, L0753: 1, H0445: 1, H0667: 1, S0194: 1 and S0398: 1.		
HPDWT56	HPDWT56R	1953	12 - 746	4128	Arg-4 to Gly-17, Pro-39 to Lys-46, His-96 to Arg-102.	L0774: 3, H0658: 3, L0803: 2, L0439: 2, H0619: 1, H0586: 1, H0309: 1, S0366: 1, L0659: 1 and S0052: 1.		
HPDWU47	HPDWU47R	1954	1 - 705	4129				
HPDWU55	HPDWU55R	1955	1 - 702	4130	Leu-4 to Phe-9, Gly-29 to Glu-39.	L0748: 18, L0755: 7, H0251: 6, L0777: 6, H0658: 4, L0754: 4, L0779: 4, S0360: 3, S0276: 3, H0674: 2, L0767: 2, L0766: 2.		

HPDWU60	HPDWU60R	1956	2 - 568	4131	Pro-50 to Tip-55.	L0775: 2, L0809: 2, H0589: 2, L0757: 2, S0358: 1, S0046: 1, H0013: 1, H0427: 1, H0546: 1, H0046: 1, H0123: 1, H0252: 1, H0031: 1, H0617: 1, L0769: 1, L0773: 1, L0662: 1, L0649: 1, L0774: 1, L0375: 1, L0776: 1, L0636: 1, L0783: 1, L0382: 1, L0666: 1, L0663: 1, L0665: 1, H0144: 1, H0670: 1, S0328: 1, H0696: 1, S0027: 1, L0758: 1, L0759: 1 and S0434: 1.		
HPDWU60	HPDWU60R	1956	2 - 568	4131	Pro-50 to Tip-55.	L0766: 7, L0748: 6, L0771: 5, S0422: 3, H0519: 3, L0749: 3, L0756: 3, H0735: 2, H0641: 2, H0529: 2, L0659: 2, S0374: 2, L0758: 2, H0484: 1, S0442: 1, S0358: 1, S0410: 1, S0007: 1, H0632: 1, L0483: 1, H0606: 1, H0268: 1, S0150: 1, L0763: 1,		

HPDWU63	HPDWU63R	1957	2 - 370	4132	Ala-51 to Tyr-56, Ala-92 to Ser-101, Ser-118 to Ile-123.	L0637: 1, L0764: 1, L0768: 1, L0774: 1, L0653: 1, L0809: 1, L0666: 1, H0144: 1, L0438: 1, H0520: 1, H0547: 1, H0658: 1, S0328: 1, H0539: 1, S0406: 1, S0027: 1, L0744: 1, L0751: 1, L0754: 1, L0750: 1, L0777: 1, L0592: 1, L0608: 1, L0593: 1, H0543: 1 and H0422: 1.		
HPFMP90	HPFMP90R	1958	38 - 163	4133	Asp-14 to Ala-19.	L0740: 3, L0758: 3, S0242: 3, L0598: 2, L0766: 2, L0803: 2, H0435: 2, H0648: 2, L0748: 2, L0756: 2, L0731: 2, L0757: 2, H0170: 1, S0300: 1, H0431: 1, H0046: 1, H0687: 1, S0003: 1, H0674: 1, H0616: 1, T0067: 1, UNKNWN: 1, L0770: 1, L0637: 1, L0373: 1, L0765: 1, L0794: 1, L0804: 1,		

HP1A109	HP1A109R	1959	209 - 394	4134	Phe-5 to Leu-11, Ser-20 to Arg-45.	L0775: 1, L0784: 1, L0805: 1, L0776: 1, L0666: 1, L0664: 1, L0665: 1, L0438: 1, H0689: 1, L0439: 1, L0754: 1, L0750: 1, L0759: 1 and L0480: 1.
HSAMY44	HSAMY44R	1960	3 - 182	4135	Gly-4 to Asn-9.	
HSAYW59	HSAYW59R	1961	2 - 364	4136	Pro-11 to Lys-16, Val-18 to Arg-45, Asn-56 to Glu-67.	H0255: 2, S0114: 1, L0510: 1 and S0216: 1.
HSCP117	HSCP117R	1962	2 - 655	4137		
HSDIA22	HSDIA22R	1963	114 - 212	4138		
HSDI165	HSDI165R	1964	239 - 412	4139		L0809: 5, L0656: 4, L0747: 3, L0750: 3, L0764: 2, L0803: 2, L0774: 2, L0651: 2, L0663: 2, L0664: 2, L0748: 2, L0756: 2, L0779: 2, L0755: 2, H0669: 1, H0392: 1, H0600: 1, S0346: 1, H0494: 1, H0646: 1, L0763: 1, L0371: 1, L0372: 1, L0775: 1, L0659: 1, L0518: 1, L0788: 1, L0665: 1, S0330: 1, S0392: 1.

						L0749: 1, L0752: 1, L0757: 1, S0260: 1, L0596: 1, L0591: 1 and L0608: 1.			
HSDIX73	HSDIX73R	1965	2 - 187	4140					
HSDIJ25	HSDIJ25R	1966	2 - 169	4141	Ser-20 to Ser-31.				
HSDZE12	HSDZE12R	1967	40 - 141	4142	Trp-1 to Ala-10.	AR033: 4, AR089: 3, AR096: 3, AR060: 3, AR061: 2, AR053: 2, AR055: 1, AR039: 0, AR052: 0 L0774: 3, L0752: 3, L0592: 3, H0625: 2, L0662: 2, L0747: 2, L0777: 2, H0580: 1, L0717: 1, H0455: 1, S0280: 1, H0251: 1, H0633: 1, L0773: 1, L0768: 1, L0794: 1, L0803: 1, L0775: 1, L0653: 1, L0776: 1, L0661: 1, L0659: 1, L0526: 1, L0809: 1, L0665: 1, H0658: 1, H0696: 1, L0755: 1, L0731: 1, L0757: 1, L0759: 1 and H0352: 1.			
HSDZJ21	HSDZJ21R	1968	40 - 180	4143	Lys-18 to Lys-30.				
HSIF84	HSIF84R	1969	3 - 80	4144	Pro-14 to Lys-26.				
HSKJR50	HSKJR50R	1970	2 - 400	4145	Leu-117 to Trp-123.				

HSLHT27	HSLHT27R	1971	2 - 196	4146	Asn-45 to Ser-54.	H0596: 5, S0388: 4, H0598: 4, H0595: 4, S0412: 4, S0282: 3, S0280: 2, H0594: 2, H0366: 2, H0542: 2, H0395: 1, H0589: 1, S0356: 1, H0411: 1, H0592: 1, H0559: 1, H0427: 1, S0050: 1, H0373: 1, S0344: 1, H0436: 1, S0260: 1, S0194: 1 and H0506: 1.		
HSODBI6	HSODBI6R	1972	1 - 174	4147				
HSPSB24	HSPSB24R	1973	1 - 612	4148	Glu-77 to Arg-82, Pro-132 to Met-139.			
HSPSB70	HSPSB70R	1974	3 - 539	4149	Ile-1 to Ala-11, Asp-67 to Leu-78, Asn-81 to Ser-90, Pro-96 to Glu-110, Ala-164 to Ala-171, Gln-173 to Lys-179.			
HSPSB74	HSPSB74R	1975	1 - 162	4150	Ala-1 to Cys-21, Trp-23 to Ser-33.			
HSPSB80	HSPSB80R	1976	2 - 631	4151				
HSPSC30	HSPSC30R	1977	1 - 342	4152	Leu-43 to Thr-58.			
HSPSE86	HSPSE86R	1978	3 - 293	4153	Ser-41 to Ile-50, Gln-55 to Glu-65, Cys-69 to Asp-78.	L0755: 5, L0748: 4, H0616: 3, L0769: 3, L0752: 3, L0731: 3, L0757: 3, S0356: 2, S0408: 2, S0046: 2.		

L0770: 2, L0771: 2, L0776: 2, L0526: 2, L0747: 2, L0750: 2, L0756: 2, L0758: 2, L0759: 2, L0588: 2, H0170: 1, L0459: 1, H0484: 1, S0358: 1, S0360: 1, H0637: 1, S0045: 1, S0132: 1, H0393: 1, S0278: 1, T0039: 1, H0427: 1, H0318: 1, S0049: 1, H0009: 1, H0081: 1, T0003: 1, H0051: 1, H0083: 1, S0003: 1, H0622: 1, H0708: 1, H0316: 1, H0038: 1, H0063: 1, H0412: 1, S0038: 1, S0150: 1, H0529: 1, L0762: 1, L0763: 1, L0646: 1, L0644: 1, L0768: 1, L0766: 1, L0774: 1, L0775: 1, L0661: 1, L0657: 1, L0782: 1, L0788: 1, L0666: 1, L0665: 1, H0683: 1, H0660: 1, S0378: 1, S0406: 1, L0777: 1, H0445: 1 and H0542: 1.

HSPSG03	HSPSG03R	1979	3 - 191	4154	Leu-41 to Asp-48.	H0124: 19, H052: 10, L0751: 7, L0747: 7, H0255: 6, H0441: 6, H0556: 5, S0222: 5, H0265: 4, S0360: 4, H0620: 4, L0655: 4, H0144: 4, L0439: 4, L0596: 4, L0601: 4, S0132: 3, H0575: 3, H0123: 3, H0012: 3, H0024: 3, H0617: 3, H0087: 3, H0529: 3, L0764: 3, L0662: 3, L0766: 3, L0663: 3, L0565: 3, L0438: 3, H0660: 3, L0743: 3, L0740: 3, H0445: 3, H0218: 2, H0585: 2, S0418: 2, S0444: 2, S0408: 2, H0208: 2, S0278: 2, H0261: 2, H0333: 2, H0706: 2, H0581: 2, S0049: 2, H0009: 2, L0471: 2, S0051: 2, T0010: 2, H0083: 2, H0594: 2, T0006: 2, H0628: 2, H0038: 2, S0440: 2, S0142: 2, S0344: 2, L5565: 2, L5566: 2.
---------	----------	------	---------	------	-------------------	---

L0776: 2, L0657: 2, L0659: 2, L0666: 2, L0665: 2, H0683: 2, H0658: 2, H0670: 2, S0146: 2, L0748: 2, L0756: 2, L0752: 2, L0755: 2, L0731: 2, L0758: 2, L0587: 2, L0361: 2, H0624: 1, T0002: 1, H0141: 1, H0717: 1, S0402: 1, H0295: 1, S0114: 1, L0785: 1, H0341: 1, S0212: 1, S0282: 1, H0722: 1, S0007: 1, S0046: 1, S0476: 1, H0619: 1, S0300: 1, H0351: 1, H0411: 1, H0392: 1, H0574: 1, H0492: 1, L0622: 1, L0623: 1, H0244: 1, H0250: 1, H0156: 1, H0618: 1, T0048: 1, H0434: 1, H0309: 1, H0597: 1, H0231: 1, H0544: 1, H0546: 1, H0046: 1, H0150: 1, H0050: 1, S0050: 1, H0016: 1, H0373: 1, H0051: 1, H0071: 1,					
--	--	--	--	--	--

	S6028: 1, H0271: 1, H0687: 1, S0022: 1, H0252: 1, H0615: 1, H0039: 1, H0033: 1, H0604: 1, H0424: 1, H0213: 1, L0055: 1, H0674: 1, H0068: 1, H0135: 1, H0040: 1, H0551: 1, H0412: 1, H0059: 1, H0100: 1, L0351: 1, L0435: 1, H0494: 1, S0306: 1, S0150: 1, H0647: 1, S0210: 1, S0002: 1, L0369: 1, L0762: 1, L0640: 1, L0371: 1, L0770: 1, L0769: 1, L0638: 1, L0637: 1, L5575: 1, L0772: 1, L0646: 1, L0641: 1, L0374: 1, L0648: 1, L0767: 1, L0768: 1, L0774: 1, L0653: 1, L0493: 1, L0559: 1, L0635: 1, L0783: 1, L0519: 1, L0545: 1, L0541: 1, L0543: 1, L0788: 1, L4559: 1, S0053: 1, L0352: 1, H0520: 1, H0547: 1,
--	--

HSPSG13	HSPSG13R	1980	2 - 784	4155				H0690: 1, H0682: 1, H0435: 1, H0539: 1, H0521: 1, S0404: 1, S3012: 1, S0037: 1, S3014: 1, S0028: 1, S0206: 1, L0742: 1, L0750: 1, L0779: 1, L0753: 1, L0757: 1, L0593: 1, S0276: 1, H0423: 1, H0506: 1, H0008: 1 and H0293: 1.		
HSPSG42	HSPSG42R	1981	3 - 596	4156		Glu-6 to Thr-11, His-31 to Asn-36, Thr-68 to Ile-76, Met-80 to Arg-89, Glu-123 to Gln-132, Arg-140 to Leu-147.				
HSPSG50	HSPSG50R	1982	123 - 608	4157		Glu-1 to Ile-6.				
HSPSG89	HSPSG89R	1983	94 - 651	4158		Pro-36 to Lys-44, Ile-46 to Ser-52, Val-82 to Gln-89, Gly-99 to Ala-104, Tyr-165 to Leu-171.				
HSPSH39	HSPSH39R	1984	11 - 793	4159						
HSPSH41	HSPSH41R	1985	3 - 431	4160						
HSPSH49	HSPSH49R	1986	3 - 539	4161						
HSPSI65	HSPSI65R	1987	3 - 734	4162		Asp-7 to Lys-15, His-142 to Glu-156.				

HSPSJ71	HSPSJ71R	1988	2 - 310	4163	Gln-181 to Phe-190.	H0124: 19, H0052: 10, L0751: 7, L0747: 7, H0255: 6, H0441: 6, H0556: 5, S0222: 5, H0265: 4, S0360: 4, H0620: 4, L0655: 4, H0144: 4, L0439: 4, L0596: 4, L0601: 4, S0132: 3, H0575: 3, H0123: 3, H0012: 3, H0024: 3, H0617: 3, H0087: 3, H0529: 3, L0764: 3, L0662: 3, L0766: 3, L0663: 3, L0565: 3, L0438: 3, H0660: 3, L0743: 3, L0740: 3, H0445: 3, H0218: 2, H0585: 2, S0418: 2, S0444: 2, S0408: 2, H0208: 2, S0278: 2, H0261: 2, H0333: 2, H0706: 2, H0581: 2, S0049: 2, H0009: 2, L0471: 2, S0051: 2, T0010: 2, H0083: 2, H0594: 2, T0006: 2, H0628: 2, H0038: 2, S0440: 2, S0142: 2, S0344: 2,		
---------	----------	------	---------	------	---------------------	---	--	--

L5565: 2, L5566: 2, L0776: 2, L0657: 2, L0659: 2, L0666: 2, L0665: 2, H0683: 2, H0658: 2, H0670: 2, S0146: 2, L0748: 2, L0756: 2, L0752: 2, L0755: 2, L0731: 2, L0758: 2, L0587: 2, L0361: 2, H0624: 1, T0002: 1, H0141: 1, H0717: 1, S0402: 1, H0295: 1, S0114: 1, L0785: 1, H0341: 1, S0212: 1, S0282: 1, H0722: 1, S0007: 1, S0046: 1, S0476: 1, H0619: 1, S0300: 1, H0351: 1, H0411: 1, H0392: 1, H0574: 1, H0492: 1, L0622: 1, L0623: 1, H0244: 1, H0250: 1, H0156: 1, H0618: 1, T0048: 1, H0434: 1, H0309: 1, H0597: 1, H0231: 1, H0544: 1, H0546: 1, H0046: 1, H0150: 1, H0050: 1, S0050: 1, H0016: 1, H0373: 1,
--

H0051: 1, H0071: 1, SG028: 1, H0271: 1, H0687: 1, S0022: 1, H0252: 1, H0615: 1, H0039: 1, H0033: 1, H0604: 1, H0424: 1, H0213: 1, L0055: 1, H0674: 1, H0068: 1, H0135: 1, H0040: 1, H0551: 1, H0412: 1, H0059: 1, H0100: 1, L0351: 1, L0435: 1, H0494: 1, S0306: 1, S0150: 1, H0647: 1, S0210: 1, S0002: 1, L0369: 1, L0762: 1, L0640: 1, L0371: 1, L0770: 1, L0769: 1, L0638: 1, L0637: 1, L5575: 1, L0772: 1, L0646: 1, L0641: 1, L0374: 1, L0648: 1, L0767: 1, L0768: 1, L0774: 1, L0653: 1, L0493: 1, L0559: 1, L0635: 1, L0783: 1, L0519: 1, L0545: 1, L0541: 1, L0543: 1, L0788: 1, L4559: 1, S0053: 1, L0352: 1,
--

HSPJ72	HSPSJ72R	1989	1 - 444	4164	H0520: 1, H0547: 1, H0690: 1, H0682: 1, H0435: 1, H0539: 1, H0521: 1, S0404: 1, S3012: 1, S0037: 1, S3014: 1, S0028: 1, S0206: 1, L0742: 1, L0750: 1, L0779: 1, L0753: 1, L0757: 1, L0593: 1, S0276: 1, H0423: 1, H0506: 1, H0008: 1 and H0293: 1. H0617: 14, L0665: 14, L0657: 11, H0682: 11, H0521: 10, S0360: 8, H0423: 7, H0657: 5, H0620: 5, H0687: 5, L0664: 5, H0547: 5, S0406: 5, S0376: 4, H0059: 4, H0641: 4, S0422: 4, L0648: 4, L0768: 4, H0658: 4, H0670: 4, H0666: 4, H0522: 4, H0584: 3, H0713: 3, H0716: 3, H0341: 3, H0638: 3, H0618: 3, H0039: 3, H0087: 3, H0509: 3, L0662: 3, L0775: 3, L0659: 3, H0689: 3.		
--------	----------	------	---------	------	--	--	--

H0435: 3, S0328: 3, H0445: 3, S0434: 3, L0581: 3, L0361: 3, H0585: 2, H0717: 2, T0049: 2, H0730: 2, S0476: 2, S0278: 2, H0550: 2, H0586: 2, H0559: 2, H0486: 2, H0575: 2, H0253: 2, H0581: 2, H0622: 2, H0606: 2, H0625: 2, H0649: 2, L0667: 2, L0382: 2, H0684: 2, L0743: 2, L0751: 2, L0599: 2, S0026: 2, H0543: 2, S0424: 2, H0171: 1, H0556: 1, S0040: 1, H0740: 1, H0650: 1, H0254: 1, H0255: 1, H0661: 1, H0663: 1, H0664: 1, H0125: 1, S0356: 1, S0442: 1, S0354: 1, S0358: 1, S0408: 1, H0722: 1, S0132: 1, S6026: 1, H0587: 1, L0623: 1, H0250: 1, L0021: 1, H0599: 1, T0082: 1, H0318: 1, H0327: 1, H0530: 1,
--

H0150: 1, L0471: 1, H0012: 1, H0023: 1, H0024: 1, H0014: 1, S0388: 1, H0071: 1, H0107: 1, H0275: 1, H0354: 1, H0510: 1, H0247: 1, H0271: 1, H0286: 1, H0615: 1, H0688: 1, H0553: 1, H0181: 1, H0124: 1, H0316: 1, H0477: 1, H0100: 1, H0561: 1, S0450: 1, S0438: 1, H0529: 1, L0371: 1, L0769: 1, L5575: 1, L0761: 1, L0772: 1, L0646: 1, L0645: 1, L0766: 1, L0774: 1, L0375: 1, L0651: 1, L0523: 1, L0806: 1, L0658: 1, L0559: 1, L0783: 1, L0384: 1, L0793: 1, H0698: 1, H0726: 1, H0519: 1, H0683: 1, H0660: 1, S0330: 1, S0454: 1, H0696: 1, S0146: 1, H0576: 1, H0727: 1, H0732: 1, S0027: 1, S0031: 1, L0596: 1,
--

HSPSQ22	HSPSQ22R	1990	1 - 339	4165	Pro-6 to Gly-13, Pro-23 to Lys-32, Lys-94 to Ala-112.	H0542: 1, H0422: 1, S0456: 1 and H0352: 1.		
HSPSQ57	HSPSQ57R	1991	1 - 327	4166	Glu-17 to Asp-32.	H0683: 242, S0358: 3, L0745: 3, H0656: 2, H0484: 2, S0354: 2, H0370: 2, H0427: 2, T0010: 2, H0039: 2, H0521: 2, S0001: 1, H0619: 1, H0592: 1, H0042: 1, H0618: 1, H0327: 1, H0024: 1, H0266: 1, H0288: 1, H0135: 1, H0551: 1, H0623: 1, H0130: 1, S0210: 1, L0774: 1, L0654: 1, L0438: 1, H0593: 1, H0539: 1, L0439: 1, H0707: 1, H0422: 1 and H0293: 1.		
HSPSY67	HSPSY67R	1992	2 - 442	4167				
HSPSZ69	HSPSZ69R	1993	2 - 406	4168				
HSPTA57	HSPTA57R	1994	244 - 438	4169				
HSPIN57	HSPIN57R	1995	2 - 61	4170	Ala-1 to Lys-9, Val-11 to Trp-17.			
HSSDM17	HSSDM17R	1996	46 - 210	4171				
HSWBFO4	HSWBFO4R	1997	36 - 302	4172	Ser-1 to Thr-8.			

HSWBP42	HSWBP42R	1998	188 - 364	4173	Glu-17 to Ala-32, Arg-39 to Trp-47, Met-9 to Arg-14, Leu-23 to Lys-29, Lys-50 to Asn-56, Ser-7 to Gly-12, Pro-23 to Pro-40, Ala-49 to Val-54,	L0803: 10, L0794: 4, L0779: 4, L0789: 2, H0648: 2, S0442: 1, S0045: 1, S0036: 1, L0520: 1, L0763: 1, L0769: 1, L0800: 1, L0644: 1, L0764: 1, L0773: 1, L0767: 1, L0804: 1, L0774: 1, L0805: 1, L0517: 1, H0659: 1, L0777: 1 and L0758: 1.
HSXEM65	HSXEM65R	1999	84 - 308	4174		H0615: 2 and S0134: 1.
HTGAR42	HTGAR42R	2000	136 - 297	4175	Ser-4 to Thr-10, Leu-42 to Pro-51.	
HTLCU84	HTLCU84R	2001	131 - 406	4176	Asp-55 to Val-63, Cys-80 to Arg-92.	
HTSHG06	HTSHG06R	2002	107 - 295	4177		
HTTDP76	HTTDP76R	2003	169 - 423	4178	Pro-8 to Trp-14, Arg-20 to Ser-27, Glu-52 to Glu-60.	
HUFQ37	HUFQ37R	2004	94 - 366	4179	Pro-26 to Gly-39, Pro-68 to Arg-75.	L0439: 15, H0052: 11, S0007: 9, L0438: 6, L0731: 6, L0779: 5, L0754: 4, H0550: 3, L0769: 3, S0126: 3.

L0743: 3, H0194: 2, H0687: 2, H0623: 2, L0768: 2, L0776: 2, L0659: 2, L0666: 2, L0663: 2, H0689: 2, S0330: 2, L0748: 2, L0786: 2, L0771: 2, L0752: 2, L0758: 2, L0608: 2, H0352: 2, H0662: 1, S0356: 1, S0354: 1, S0444: 1, S0045: 1, S0476: 1, H0441: 1, H0431: 1, H0333: 1, H0642: 1, H0575: 1, H0590: 1, T0048: 1, H0150: 1, H0024: 1, S0050: 1, S0388: 1, H0252: 1, H0039: 1, H0135: 1, H0038: 1, H0264: 1, H0494: 1, L0770: 1, L0372: 1, L0646: 1, L0521: 1, L0794: 1, L0803: 1, L0775: 1, L0653: 1, L0657: 1, L0809: 1, L0792: 1, L0664: 1, H0144: 1, L0352: 1, H0519: 1, H0593: 1, H0658: 1, H0672: 1, H0539: 1,
--

							S0406: 1, L0751: 1, L0749: 1, L0756: 1, L0753: 1 and H0506: 1.			
HULAP70	HULAP70R	2005	2 - 349	4180			Arg-8 to Arg-28.			
HUSGA11	HUSGA11R	2006	19 - 390	4181			Arg-11 to Arg-18, Ser-42 to Arg-52, Met-62 to Pro-73, Pro-102 to Gly-115.			
HUSIL88	HUSIL88R	2007	187 - 288	4182						
HUUCH08	HUUCH08R ^A	2008	351 - 620	4183						
HUVFA39	HUVFA39R	2009	1 - 462	4184			Arg-2 to Gly-12, Arg-28 to Gly-41, Gly-48 to Val-68, Lys-94 to Arg-118.			
HVCAA31	HVCAA31R	2010	94 - 618	4185			Met-4 to Thr-22, Asp-45 to Gly-50, Gly-65 to Asp-70, Lys-96 to Asp-104, Ile-121 to Leu-126, Met-133 to Glu-144, Ala-149 to Asn-156.			
HVCAA37	HVCAA37R	2011	208 - 717	4186			Ile-36 to Glu-41, Glu-55 to Lys-63, Lys-68 to Gln-81, Pro-84 to Lys-90, Pro-108 to Ser-119, Pro-22 to Pro-28, Glu-109 to Arg-118.			
HVCAA68	HVCAA68R	2012	2 - 373	4187						

HVCAA94	HVCAB02	HVCA94R	2013	1 - 462	4188	H0666: 696, H0660: 11, L0666: 7, H0617: 4, L0664: 4, H0549: 3, H0620: 3, H0181: 3, H0593: 3, H0684: 3, H0484: 2, H0619: 2, H0051: 2, H0606: 2, H0670: 2, L0748: 2, L0439: 2, S0040: 1, H0483: 1, H0255: 1, H0662: 1, S0007: 1, H0486: 1, H0052: 1, H0597: 1, H0046: 1, H0009: 1, H0012: 1, H0059: 1, T0041: 1, H0517: 1, L0770: 1, L0764: 1, L0803: 1, L0783: 1, L0809: 1, H0435: 1, H0658: 1, H0539: 1, H0521: 1, H0696: 1 and S0434: 1.	
HVCAB02	HVCAB02R		2014	2 - 649	4189		
HVCAB03		HVCAB03R	2015	353 - 664	4190	Arg-1 to Gln-18, Asp-52 to Leu-57, Asp-67 to Lys-74, Asp-85 to Ala-92.	
HVCAB18		HVCAB18R	2016	3 - 758	4191		L0769: 7, L0747: 7,
HVCAB44		HVCAB44R	2017	3 - 224	4192		L0777: 7, L0752: 7, L0665: 6, L0770: 5,

L0766: 5, L0779: 5, L0771: 4, L0666: 4, L0439: 4, L0751: 4, H0052: 3, H0135: 3, L0762: 3, L0775: 3, L0806: 3, L0809: 3, L0647: 3, S0404: 3, L0743: 3, L0749: 3, L0731: 3, S0360: 2, H0083: 2, H0412: 2, L0761: 2, L0764: 2, L0662: 2, L0633: 2, L0783: 2, L0532: 2, L0664: 2, L0748: 2, L0750: 2, L0758: 2, L0759: 2, H0543: 2, H0265: 1, S0218: 1, H0657: 1, H0254: 1, H0661: 1, H0402: 1, S0354: 1, S0046: 1, H0619: 1, S6026: 1, L0717: 1, H0409: 1, H0587: 1, H0486: 1, H0013: 1, H0069: 1, H0156: 1, H0599: 1, L0022: 1, H0575: 1, H0597: 1, H0544: 1, H0546: 1, H0150: 1, H0057: 1, H0014: 1, S0003: 1, H0252: 1,
--

									H0615: 1, H0030: 1, H0644: 1, H0617: 1, S0364: 1, H0316: 1, H0598: 1, S0036: 1, H0063: 1, H0646: 1, S0426: 1, L0369: 1, L0772: 1, L0773: 1, L0767: 1, L0774: 1, L0375: 1, L0378: 1, L0655: 1, L0656: 1, L0790: 1, L0663: 1, H0520: 1, H0689: 1, H0670: 1, H0660: 1, H0666: 1, S0152: 1, H0521: 1, H0436: 1, S0206: 1, L0744: 1, L0786: 1, L0755: 1, L0587: 1, L0362: 1, H0422: 1, S0456: 1 and L0600: 1.			
HVCAB52	HVCAB52R	2018	4 - 612	4193								
HVCAB57	HVCAB57R	2019	1 - 357	4194								
HVCAB88	HVCAB88R	2020	83 - 739	4195			Lys-6 to Thr-11, Gly-22 to Phe-30, Leu-40 to Gly-53, Arg-56 to Lys-64, Lys-93 to Leu-101, Met-176 to Leu-181.					
HVCAC42	HVCAC42R	2021	319 - 417	4196			Arg-7 to Asp-13.					
HVCAD52	HVCAD52R	2022	1 - 369	4197								

HVCAE01	HVCAE01R	2023	49 - 663	4198	Tyr-44 to Asp-49, Pro-132 to Leu-139, Cys-168 to His-174.			
HVCAE15	HVCAE15R	2024	3 - 605	4199	Pro-49 to Val-58, Gln-60 to Gln-78, Arg-85 to His-99, Phe-122 to Asp-128, Arg-157 to Arg-163, Leu-178 to Thr-193.			
HVCAE22	HVCAE22R	2025	2 - 493	4200	Gly-19 to Ala-24, Asn-32 to Val-38. S0358: 7, H0659: 7, H0542: 7, H0543: 6, L0666: 5, L0747: 5, S0418: 4, H0494: 4, L0657: 4, L0517: 4, S0374: 4, L0731: 4, L0596: 4, H0341: 3, H0385: 3, S0346: 3, H0553: 3, S0144: 3, S0210: 3, L0764: 3, L0659: 3, L0663: 3, L0664: 3, H0521: 3, L0754: 3, L0779: 3, L0752: 3, L0755: 3, H0445: 3, H0422: 3, T0049: 2, S0116: 2, S0212: 2, S0282: 2, S0376: 2, S0360: 2, S0045: 2, H0486: 2, H0250: 2, H0427: 2, H0581: 2, H0251: 2,			

	H0545: 2, H0083: 2, H0510: 2, H0412: 2, S0422: 2, L0769: 2, L0637: 2, L0646: 2, L0651: 2, H0144: 2, H0519: 2, H0660: 2, S0380: 2, L0740: 2, L0608: 2, L0603: 2, H0668: 2, H0667: 2, S0412: 2, H0265: 1, T0002: 1, S0402: 1, S6024: 1, H0657: 1, H0656: 1, H0663: 1, H0638: 1, H0580: 1, H0208: 1, S0046: 1, L0717: 1, S0278: 1, H0370: 1, H0586: 1, H0497: 1, H0574: 1, T0109: 1, H0156: 1, H0575: 1, H0590: 1, H0318: 1, S0049: 1, H0544: 1, H0572: 1, H0123: 1, L0471: 1, H0024: 1, H0373: 1, L0163: 1, S0388: 1, H0355: 1, H0375: 1, S6028: 1, H0267: 1, H0687: 1, S0312: 1, S0250: 1, S0003: 1, H0316: 1, H0598: 1,
--	--

	HVCAE56	HVCAE56R	2026	75 - 572	4201	Asn-20 to Gln-27.	H0163: 1, H0551: 1, H0623: 1, H0059: 1, T0042: 1, H0625: 1, H0561: 1, H0509: 1, S0150: 1, H0633: 1, H0646: 1, S0426: 1, L0598: 1, H0529: 1, H0517: 1, L0761: 1, L0521: 1, L0662: 1, L0766: 1, L0775: 1, L0653: 1, L0655: 1, L0783: 1, L0382: 1, L0809: 1, L0519: 1, L0529: 1, L0792: 1, L0665: 1, H0547: 1, H0593: 1, S0126: 1, H0689: 1, H0435: 1, H0666: 1, S0328: 1, H0518: 1, H0522: 1, H0436: 1, S0037: 1, S0027: 1, S0032: 1, L0439: 1, L0756: 1, S0031: 1, L0588: 1, L0595: 1, S0026: 1 and H0136: 1.
	HVCAG56	HVCAG56R	2027	3 - 551	4202	Arg-92 to Arg-101, Lys-134 to Asn-140, Ser-149 to Thr-159, Glv-166 to Ile-175.	

HVCAG86	HVCAG86R	2028	150 - 509	4203	Arg 6 to Pro-21.	H0620: 16, L0747: 12, H0599: 11, L0758: 9, S0358: 8, L0751: 7, L0754: 7, L0596: 7, H0556: 6, H0393: 5, H0706: 5, H0052: 5, H0616: 5, H0529: 5, L0774: 5, L0776: 5, H0483: 4, S0442: 4, H0253: 4, H0012: 4, H0083: 4, S0150: 4, L0662: 4, H0670: 4, H0521: 4, L0748: 4, L0581: 4, H0543: 4, H0341: 3, S0376: 3, H0580: 3, S0007: 3, S0280: 3, H0036: 3, H0618: 3, H0581: 3, H0309: 3, H0510: 3, H0428: 3, H0040: 3, H0087: 3, L0764: 3, L0775: 3, L0655: 3, L0666: 3, L0663: 3, L0664: 3, H0547: 3, L0749: 3, L0750: 3, L0595: 3, H0657: 2, H0656: 2, S0116: 2, H0638: 2, S0356: 2, S0360: 2, S0046: 2,
HVCAH03	HVCAH03R	2029	3 - 689	4204		

H0411: 2, H0550: 2, S6014: 2, H0370: 2, H0574: 2, L0622: 2, L0623: 2, H0042: 2, S0182: 2, H0318: 2, H0085: 2, H0373: 2, H0275: 2, H0188: 2, H0030: 2, H0169: 2, H0124: 2, H0135: 2, H0038: 2, H0100: 2, T0042: 2, H0494: 2, H0625: 2, H0509: 2, H0132: 2, H0130: 2, H0538: 2, L0800: 2, L0768: 2, L0381: 2, L0784: 2, L0378: 2, L0653: 2, L0659: 2, L0809: 2, H0651: 2, H0696: 2, H0134: 2, S3014: 2, S0027: 2, L0743: 2, L0744: 2, L0740: 2, L0731: 2, S0031: 2, L0604: 2, H0423: 2, H0352: 2, H0265: 1, T0002: 1, S0134: 1, H0583: 1, H0484: 1, H0661: 1, L0005: 1, S0408: 1, S0045: 1, H0619: 1, H0645: 1, H0351: 1,
--

	H0369: 1, H0549: 1, T0104: 1, H0592: 1, H0587: 1, H0333: 1, H0643: 1, H0331: 1, H0632: 1, H0270: 1, H0101: 1, H0013: 1, H0575: 1, S0010: 1, H0196: 1, H0263: 1, T0115: 1, H0597: 1, H0530: 1, H0545: 1, H0009: 1, H0571: 1, H0081: 1, H0050: 1, H0024: 1, H0095: 1, L0163: 1, H0051: 1, S0388: 1, H0107: 1, H0375: 1, H0266: 1, S0334: 1, H0288: 1, H0286: 1, H0252: 1, H0039: 1, H0424: 1, H0213: 1, H0181: 1, H0673: 1, H0674: 1, S0364: 1, H0708: 1, S0366: 1, S0036: 1, H0591: 1, H0551: 1, H0488: 1, H0412: 1, H0413: 1, H0623: 1, T0041: 1, L0475: 1, H0560: 1, H0561: 1, S0306: 1, H0714: 1, H0641: 1, H0633: 1,
--	--

[illegible]

HVCAI08	HVCAI08R	2032	67 - 453	4207	Pro-6 to Arg-13, Met-34 to Asp-41, Lys-65 to Thr-74.	L0748: 28, L0754: 27, L0740: 15, H0056: 13, L0750: 13, S0007: 12, L0757: 12, S0126: 11, S0222: 10, L0731: 10, S0360: 9, H0144: 9, S0358: 8, H0009: 8, L0005: 7, S0010: 7, H0266: 7, L0742: 7, L0752: 7, H0547: 6, S0408: 5, S0046: 5, L0471: 5, S0003: 5, S0028: 5, L0758: 5, L0362: 5, S0026: 5, H0294: 4, H0341: 4, H0638: 4, S0045: 4, H0327: 4, H0039: 4, H0031: 4, H0413: 4, S0210: 4, L0769: 4, L0662: 4, L0775: 4, L0776: 4, L0809: 4, H0689: 4, S3014: 4, S0206: 4, L0747: 4, H0445: 4, L0608: 4, H0661: 3, S0376: 3, S0278: 3, H0369: 3, H0441: 3, H0575: 3, S0049: 3, S0388: 3, S0036: 3, H0616: 3, H0100: 3, H0494: 3,
---------	----------	------	----------	------	--	--

S0440: 3, L0520: 3, L0764: 3, S0374: 3, H0682: 3, H0659: 3, H0672: 3, S0027: 3, L0439: 3, S0192: 3, H0624: 2, H0170: 2, T0002: 2, H0716: 2, S0282: 2, H0305: 2, S0420: 2, L0103: 2, H0592: 2, H0586: 2, T0039: 2, T0109: 2, H0013: 2, S0346: 2, T0048: 2, H0318: 2, S0474: 2, H0251: 2, H0597: 2, H0150: 2, H0178: 2, H0569: 2, H0081: 2, H0024: 2, S0051: 2, H0615: 2, H0428: 2, H0644: 2, H0708: 2, H0090: 2, H0412: 2, H0059: 2, H0633: 2, S0142: 2, S0422: 2, L0772: 2, L0646: 2, L0768: 2, L0806: 2, L0782: 2, H0684: 2, S0328: 2, S0378: 2, S0380: 2, H0522: 2, H0134: 2, S0406: 2, S3012: 2, L0751: 2, L0755: 2,
--

S0031: 2, L0605: 2, L0592: 2, L0601: 2, L0600: 2, L0615: 1, H0265: 1, S0040: 1, S0342: 1, T0049: 1, S0134: 1, H0650: 1, H0657: 1, S0116: 1, H0663: 1, H0177: 1, H0125: 1, H0192: 1, S0348: 1, S0356: 1, S0442: 1, S0354: 1, S0444: 1, S0410: 1, T0008: 1, H0580: 1, H0208: 1, S0132: 1, S6026: 1, S0300: 1, H0549: 1, H0431: 1, H0370: 1, H0438: 1, H0574: 1, H0250: 1, H0427: 1, H0097: 1, T0082: 1, H0421: 1, L2250: 1, H0309: 1, T0110: 1, H0544: 1, H0086: 1, H0563: 1, H0014: 1, H0051: 1, H0021: 1, H0083: 1, H0594: 1, S6028: 1, H0687: 1, H0290: 1, H0286: 1, S0214: 1, H0622: 1, T0023: 1, H0111: 1, H0628: 1,						
--	--	--	--	--	--	--

H0617: 1, L0055: 1, H0166: 1, H0135: 1, H0163: 1, H0591: 1, H0038: 1, S0112: 1, L0564: 1, T0041: 1, T0042: 1, S0014: 1, S0438: 1, H0509: 1, H0641: 1, H0529: 1, L0762: 1, L4747: 1, L0372: 1, L0553: 1, L0771: 1, L0773: 1, L0521: 1, L0767: 1, L0766: 1, L5569: 1, L5574: 1, L0381: 1, L0650: 1, L0774: 1, L0376: 1, L0653: 1, L0527: 1, L0657: 1, L0518: 1, L0783: 1, L0545: 1, L0532: 1, L0666: 1, L0663: 1, S0216: 1, H0520: 1, H0593: 1, H0711: 1, H0690: 1, H0670: 1, H0660: 1, H0666: 1, H0539: 1, S0152: 1, S0332: 1, H0521: 1, H0704: 1, S0044: 1, S0146: 1, S0404: 1, L0749: 1, S0260: 1, H0444: 1, S0434: 1,
--

HVCAI24	HVCAI24R	2033	108 - 365	4208	Asn-1 to Lys-6.	L0596: 1, L0588: 1, L0599: 1, L0366: 1, S0011: 1, H0668: 1, H0216: 1, S0242: 1, S0196: 1, H0542: 1, H0543: 1, L0697: 1, L0698: 1, S0398: 1, S0424: 1, S3020: 1 and S0460: 1.		
HVCAI79	HVCAI79R	2034	2 - 508	4209				
HVCAI27	HVCAI27R	2035	1 - 537	4210		S0408: 5, L0809: 5, L0800: 4, L0804: 4, H0647: 3, L0803: 3, L0775: 3, L0805: 3, S0126: 3, L0751: 3, S0360: 2, S0278: 2, H0409: 2, H0424: 2, H0617: 2, H0494: 2, L0783: 2, H0670: 2, L0747: 2, L0777: 2, L0731: 2, L0601: 2, H0556: 1, H0295: 1, S0116: 1, H0341: 1, S0442: 1, S0358: 1, S0376: 1, H0370: 1, H0042: 1, H0575: 1, S0049: 1, H0150: 1, H0163: 1, S0294: 1, S0438: 1, H0633: 1,		

HVCAJ81	HVCAJ81R	2036	1 - 477	4211	Lys-61 to Gln-73, Gln-81 to Ser-97.	H0529: 1, L0769: 1, L0374: 1, L0764: 1, L0560: 1, L0774: 1, L0376: 1, L0629: 1, L0807: 1, L0657: 1, L0659: 1, L0791: 1, L0666: 1, H0682: 1, H0683: 1, H0658: 1, H0666: 1, S0328: 1, H0539: 1, H0555: 1, H0436: 1, S3012: 1, L0779: 1, L0752: 1, L0757: 1, L0758: 1, L0759: 1, H0667: 1 and H0423: 1.		
HVCAJ95	HVCAJ95R	2037	1 - 210	4212	Arg-14 to Gly-41, Arg-47 to Glu-53, Gln-56 to Lys-70.			
HVCAK02	HVCAK02R	2038	3 - 467	4213	Glu-1 to Lys-9.			
HVCAJ06	HVCAJ06R	2039	3 - 383	4214				
HVCAO17	HVCAO17R	2040	1 - 516	4215		H0009: 3, H0135: 3, H0494: 3, H0265: 2, H0341: 2, H0484: 2, S0046: 2, S0222: 2, H0266: 2, S0144: 2, H0658: 2, L0742: 2, H0542: 2, H0423: 2, H0171: 1, T0002: 1.		

HVCAO63	HVCAO63R	2041	10 - 306	4216	Pro-56 to Thr-65.	H0685: 1, S0040: 1, H0295: 1, S0420: 1, S0356: 1, S0360: 1, H0392: 1, H0586: 1, T0109: 1, H0427: 1, H0599: 1, H0618: 1, H0318: 1, H0597: 1, H0544: 1, H0012: 1, H0024: 1, H0014: 1, S0022: 1, H0428: 1, H0535: 1, H0068: 1, H0090: 1, H0040: 1, H0063: 1, H0264: 1, H0413: 1, T0042: 1, H0560: 1, H0633: 1, S0142: 1, S0422: 1, H0529: 1, H0519: 1, S0126: 1, H0684: 1, H0666: 1, H0672: 1, H0134: 1, H0214: 1, H0631: 1, S0027: 1, S0028: 1, L0753: 1, L0757: 1, L0599: 1, L0608: 1, L0594: 1, S0026: 1, H0667: 1, H0136: 1, S0276: 1 and H0543: 1.
HVCAO63	HVCAO63R	2042	3 - 407	4217		
HVCAO53	HVCAO53R	2043	28 - 480	4218	Val-105 to Ile-113.	

[illegible]

L0565: 2, H0659: 2, H0666: 2, H0648: 2, S0328: 2, H0525: 2, H0696: 2, H0134: 2, S0406: 2, L0756: 2, L0752: 2, L0757: 2, S0436: 2, L0595: 2, S0384: 2, H0506: 2, H0171: 1, S0040: 1, T0049: 1, H0661: 1, H0638: 1, S0418: 1, S0354: 1, S0360: 1, S0410: 1, S0007: 1, S0300: 1, S0278: 1, S6014: 1, H0431: 1, H0587: 1, H0333: 1, H0574: 1, H0270: 1, T0040: 1, L0586: 1, H0635: 1, H0156: 1, T0082: 1, H0706: 1, S0346: 1, H0421: 1, H0052: 1, H0597: 1, H0545: 1, H0242: 1, L0471: 1, H0373: 1, S0051: 1, H0375: 1, H0594: 1, H0687: 1, H0288: 1, H0328: 1, H0553: 1, L0143: 1, H0032: 1, H0598: 1, H0634: 1, H0616: 1,							
--	--	--	--	--	--	--	--

HVCAS57	HVCAS57R	2048	114 - 257	4223		H0413: 1, H0100: 1, T0042: 1, H0560: 1, H0625: 1, H0561: 1, S0150: 1, H0633: 1, H0652: 1, L0763: 1, L0371: 1, L0638: 1, L0667: 1, L0648: 1, L0521: 1, L0662: 1, L0649: 1, L0803: 1, L0776: 1, L0783: 1, L0383: 1, L0647: 1, L0664: 1, L0665: 1, H0520: 1, H0689: 1, H0414: 1, H0658: 1, H0670: 1, H0660: 1, H0710: 1, S0152: 1, S0332: 1, S0454: 1, H0522: 1, H0704: 1, H0214: 1, S3012: 1, S3014: 1, S0027: 1, S0028: 1, S0206: 1, L0740: 1, L0750: 1, S0434: 1, L0581: 1, H0653: 1, H0667: 1, S0242: 1, S0194: 1, H0422: 1 and S0424: 1. L0748: 6, L0439: 6, L0731: 6, H0663: 4, S0354: 4, H0038: 3, S0150: 3, L0666: 3,
---------	----------	------	-----------	------	--	---

S0404: 3, L0758: 3, S0212: 2, H0497: 2, H0551: 2, H0412: 2, H0561: 2, S0210: 2, L0521: 2, L0526: 2, H0506: 2, H0661: 1, S0418: 1, S0420: 1, S0358: 1, S0408: 1, H0619: 1, H0431: 1, H0486: 1, T0040: 1, T0060: 1, H0013: 1, L0021: 1, H0590: 1, H0581: 1, H0052: 1, H0263: 1, H0373: 1, H0266: 1, S0312: 1, S0314: 1, S0022: 1, H0622: 1, H0553: 1, H0708: 1, H0413: 1, H0560: 1, L0640: 1, L0646: 1, L0764: 1, L0649: 1, L0389: 1, L0804: 1, L0659: 1, L0543: 1, L0789: 1, L0664: 1, H0697: 1, S0374: 1, H0520: 1, H0435: 1, H0659: 1, H0666: 1, S0152: 1, S0406: 1, H0436: 1, S0027: 1, L0742: 1, L0753: 1, L0595: 1,						
--	--	--	--	--	--	--

HVCAU64	HVCAU64R	2049	3 - 404	4224	Arg-7 to Val-15.	H0668: 1, S0276: 1 and H0422: 1.	
HVCBD18	HVCBD18R	2050	190 - 309	4225	Val-3 to Lys-9, Leu-32 to Gln-40.		
HVCBE76	HVCBE76R	2051	3 - 431	4226			
HVCBE79	HVCBE79R	2052	3 - 524	4227			
HVCBF38	HVCBF38R	2053	3 - 251	4228			
HVCBF89	HVCBF89R	2054	2 - 361	4229		AR039: 419, AR096: 339, AR053: 225, AR052: 212, AR104: 168, AR089: 168, AR060: 114, AR033: 108, AR055: 99, AR061: 74	
HVCBG01	HVCBG01R	2055	22 - 318	4230	Lys-7 to Thr-13, Asp-24 to Thr-30, Gly-39 to Glu-52.		
HVCBQ31	HVCBQ31R	2056	2 - 448	4231			
HVCCA08	HVCCA08R	2057	2 - 298	4232			
HVCCCK34	HVCCCK34R	2058	34 - 699	4233			
HVCCR91	HVCCR91R	2059	1 - 156	4234			
HVCCV93	HVCCV93R	2060	203 - 469	4235	Ser-25 to Asn-31, Asp-38 to Val-48, Ser-57 to Gly-63.		
HVCDA75	HVCDA75R	2061	1 - 315	4236			
HVCDD19	HVCDD19R	2062	31 - 459	4237	Pro-1 to Ser-7, Val-22 to Asn-29,		

					Pro-45 to Pro-51, Arg-59 to Val-64, Val-92 to Lys-98.	
HVCDF50	HVCDF50R	2063	3 - 353	4238	Ser-56 to Phe-69, Arg-113 to Thr-123, Leu-128 to Ser-135, Lys-148 to Ala-156, Gly-166 to Ser-171, Glu-188 to Leu-194, Ala-211 to Gly-222.	H0666: 8, S0144: 6, L0747: 5, H0545: 4, L0769: 4, L0766: 4, L0731: 4, H0341: 3, L0764: 3, L0794: 3, L0750: 3, L0755: 3, L0758: 3, S0045: 2, H0257: 2, H0581: 2, H0546: 2, H0135: 2, L0803: 2, L0637: 2, L0789: 2, L0666: 2, S0044: 2, H0445: 2, L0588: 2, L0594: 2, L0601: 2, H0543: 2, S0040: 1, H0295: 1, H0583: 1, S0116: 1, S0212: 1, H0661: 1, H0664: 1, S0418: 1, S0356: 1, S0358: 1, S0360: 1, S0007: 1, S0046: 1, S0132: 1, S0278: 1, H0592: 1, H0586: 1, H0559: 1, H0575: 1, S0182: 1, H0620: 1, S0388: 1, H0083: 1, S0312: 1,
HVC DH77	HVC DH77R	2064	2 - 679	4239		

HVVAB25	HVVAB25R	2065	3 - 155	4240				H0617: 1, H0169: 1, H0708: 1, H0163: 1, H0551: 1, H0488: 1, T0069: 1, H0102: 1, H0100: 1, H0494: 1, L0475: 1, H0646: 1, S0142: 1, S0002: 1, L0762: 1, L0796: 1, L0646: 1, L0800: 1, L0645: 1, L0771: 1, L0662: 1, L0768: 1, L0386: 1, L0651: 1, L0783: 1, L0790: 1, L0791: 1, L0663: 1, H0144: 1, L0438: 1, H0519: 1, H0134: 1, S3014: 1, L0740: 1, L0779: 1, L0757: 1, S0031: 1, L0592: 1, H0665: 1, S0276: 1 and H0422: 1.
HVVAB37	HVVAB37R	2066	74 - 619	4241				
HVVAC18	HVVAC18R	2067	56 - 238	4242				
HVVAD74	HVVAD74R	2068	403 - 570	4243				L0766: 12, S0412: 8, S0422: 4, L0756: 4, H0341: 3, H0638: 3, L0770: 3, L0666: 3, L0777: 3, S0360: 2, H0318: 2, H0327: 2.

L0803: 2, H0670: 2, L0740: 2, L0731: 2, S0260: 2, S0436: 2, H0170: 1, H0125: 1, S0418: 1, S0444: 1, H0489: 1, H0580: 1, H0734: 1, S0222: 1, H0587: 1, H0497: 1, H0013: 1, H0075: 1, H0427: 1, H0046: 1, H0354: 1, L0142: 1, L0055: 1, H0090: 1, H0412: 1, S0440: 1, H0647: 1, H0529: 1, L0369: 1, L0371: 1, L0772: 1, L0646: 1, L0771: 1, L0649: 1, L0381: 1, L0650: 1, L0774: 1, L0653: 1, L0655: 1, L0606: 1, L0790: 1, L0532: 1, L0663: 1, L0664: 1, S0374: 1, H0593: 1, H0711: 1, H0659: 1, H0638: 1, H0672: 1, H0521: 1, L0779: 1, L0755: 1, L0758: 1, L0759: 1, L0593: 1, S0242: 1, H0423: 1 and H0721: 1.				
---	--	--	--	--

HVVAE73	HVVAE73R	2069	96 - 347	4244	Gln-21 to Ile-26.			
HVVAE88	HVVAE88R	2070	157 - 381	4245	Ser-1 to Asp-9, Lys-26 to Gln-36.	H0672: 2, L0748: 2, H0156: 1 and H0494: 1.		
HVVAH91	HVVAH91R	2071	3 - 245	4246		L0747: 5, L0731: 4, L0742: 3, L0745: 3, L0769: 2, L0766: 2, L0774: 2, L0597: 2, L0604: 2, T0049: 1, S0358: 1, H0549: 1, H0486: 1, T0040: 1, S0280: 1, H0318: 1, H0263: 1, H0551: 1, H0633: 1, H0529: 1, L0640: 1, L0763: 1, L0771: 1, L0768: 1, L0388: 1, L0657: 1, L0659: 1, L0517: 1, L0666: 1, L0663: 1, H0648: 1, H0672: 1, H0521: 1, L0749: 1, L0750: 1, L0779: 1, L0780: 1 and L0592: 1.		
HVVAI03	HVVAI03R	2072	2 - 307	4247				
HVVAJ23	HVVAJ23R	2073	3 - 527	4248	Gln-33 to Ala-38, Thr-47 to Asn-64, Pro-117 to Leu-122, Thr-160 to Gly-171.			
HVVAJ28	HVVAJ28R	2074	1 - 327	4249	His-1 to Trp-6, Gly-28 to Asp-34, Arg-41 to Ala-53.			

HVVAJ47	HVVAJ47R	2075	159 - 443	4250	Arg-69 to Thr-76, Leu-97 to Glu-103.	L0659: 55, H0644: 23, L0748: 18, L0666: 17, L0747: 17, H0622: 16, S0194: 16, H0553: 15, L0662: 15, S0126: 15, L0740: 15, L0754: 14, H0031: 13, H0593: 12, L0649: 11, H0435: 11, L0757: 11, H0124: 10, S0250: 9, S0356: 8, H0672: 7, L0362: 7, L0779: 6, S0210: 5, L0771: 5, L0663: 5, L0664: 5, H0547: 5, L0750: 5, L0601: 5, S0360: 4, H0619: 4, L0764: 4, L0804: 4, L0775: 4, S0358: 3, H0486: 3, H0628: 3, H0264: 3, L0451: 3, L0776: 3, L0655: 3, L0783: 3, H0693: 3, H0660: 3, S0454: 3, L0749: 3, L0605: 3, S0192: 3, H0170: 2, H0294: 2, S0180: 2, H0586: 2, H0013: 2, H0687: 2, H0428: 2,

L0483: 2, H0488: 2, S0450: 2, H0647: 2, S0208: 2, L0648: 2, L0523: 2, L0809: 2, L0665: 2, H0144: 2, L0565: 2, H0690: 2, H0518: 2, H0696: 2, S3012: 2, L0752: 2, L0755: 2, L0731: 2, H0665: 2, H0171: 1, H0656: 1, S0212: 1, S0376: 1, S0410: 1, S0132: 1, H0393: 1, L0717: 1, H0392: 1, H0331: 1, H0485: 1, T0040: 1, T0060: 1, L0021: 1, H0599: 1, T0082: 1, H0618: 1, H0052: 1, H0085: 1, T0110: 1, H0046: 1, H0050: 1, L0471: 1, H0355: 1, S0003: 1, H0615: 1, H0039: 1, L0143: 1, H0111: 1, L0455: 1, S0366: 1, H0135: 1, H0040: 1, H0551: 1, H0100: 1, L0564: 1, H0509: 1, H0517: 1, L0763: 1, L0769: 1, L0772: 1,
--

HVVAK42	HVVAK42R	2076	121 - 312	4251			L0646: 1, L0768: 1, L0375: 1, L0784: 1, L0806: 1, L0805: 1, L0653: 1, L0654: 1, L0517: 1, L0384: 1, L0383: 1, L0647: 1, L0789: 1, L0791: 1, L0438: 1, H0520: 1, H0689: 1, H0682: 1, H0684: 1, S0152: 1, H0704: 1, H0555: 1, S0432: 1, S3014: 1, S0027: 1, S0028: 1, L0744: 1, L0758: 1, H0595: 1, H0707: 1, S0436: 1, L0591: 1, L0599: 1, S0196: 1, H0422: 1, S0384: 1 and L0600: 1.		
HVVAK46	HVVAK46R	2077	3 - 782	4252	Lys-1 to Lys-14, Phe-21 to Trp-26, Val-87 to Cys-92, Thr-139 to Gln-153, Gln-156 to Lys-162, Glu-171 to Leu-177.				
HVVAK68	HVVAK68R	2078	372 - 584	4253				L0747: 22, L0599: 11, L0766: 9, L0748: 9, L0483: 8, L0740: 7, L0665: 5, L0754: 5,	

L0764: 4, L0775: 4, L0362: 4, H0695: 3, L0663: 3, H0144: 3, L0755: 3, H0170: 2, L0717: 2, H0437: 2, H0036: 2, H0251: 2, H0545: 2, L0471: 2, H0266: 2, H0553: 2, H0413: 2, L0763: 2, L0772: 2, L0655: 2, L0543: 2, L0666: 2, H0547: 2, S0406: 2, L0745: 2, L0749: 2, L0731: 2, L0757: 2, L0758: 2, H0445: 2, L0596: 2, L0591: 2, L0581: 2, L0608: 2, S0192: 2, H0624: 1, S0134: 1, H0650: 1, S0116: 1, H0663: 1, S0356: 1, S0444: 1, H0580: 1, S0300: 1, H0441: 1, H0442: 1, H0586: 1, H0587: 1, H0333: 1, H0643: 1, H0632: 1, H0486: 1, H0013: 1, H0118: 1, H0042: 1, H0004: 1, T0048: 1, H0318: 1, H0421: 1, H0041: 1,						
--	--	--	--	--	--	--

HVVAK85	HVVAK85R	2079	2 - 373	4254			H0014: 1, S0051: 1, H0071: 1, H0083: 1, H0687: 1, S0003: 1, S0214: 1, H0688: 1, H0031: 1, H0163: 1, H0038: 1, H0040: 1, H0616: 1, H0063: 1, H0059: 1, T0069: 1, L0475: 1, S0015: 1, H0633: 1, H0538: 1, L0769: 1, L0796: 1, L0637: 1, L0373: 1, L0521: 1, L0375: 1, L0806: 1, L0661: 1, L0527: 1, L0656: 1, L0809: 1, L0647: 1, L0664: 1, H0519: 1, H0682: 1, H0435: 1, H0659: 1, H0670: 1, H0672: 1, S0330: 1, H0521: 1, H0696: 1, H0134: 1, H0214: 1, H0555: 1, L0746: 1, L0750: 1, L0752: 1, L0759: 1, H0343: 1, L0589: 1, L0590: 1, S0194: 1, H0543: 1, S0452: 1 and H0506: 1.
HVVAK85	HVVAK85R	2079	2 - 373	4254			
HVVAL81	HVVAL81R	2080	97 - 408	4255	Gly-72 to Asp-81.	AR089: 67, AR104: 8,	

AR096: 5, AR060: 4, AR055: 4, AR061: 3, H0169: 21, H0674: 19, L0754: 19, H0309: 15, T0060: 7, H0038: 7, H0509: 7, S0044: 7, S0358: 6, H0124: 6, H0163: 6, H0672: 6, L0731: 6, L0750: 5, L0603: 5, H0032: 4, H0616: 4, S0330: 4, L0749: 4, L0755: 4, H0597: 3, S0318: 3, H0622: 3, L0540: 3, S0328: 3, S0406: 3, L0758: 3, S0444: 2, H0486: 2, H0122: 2, H0355: 2, S0316: 2, L0770: 2, L0646: 2, L0771: 2, L0662: 2, L0364: 2, L0803: 2, L0783: 2, H0696: 2, L0743: 2, L0747: 2, L0581: 2, H0506: 2, S0356: 1, S0376: 1, H0675: 1, H0643: 1, H0706: 1, H0253: 1, H0085: 1, H0204: 1, H0510: 1, S0314: 1, H0553: 1, H0673: 1,
--

HVVAP65	HVVAP65RPO0B	2081	124 - 354	4256	Arg-1 to Cys-10, Asn-29 to Phe-38.	S0366: 1, H0380: 1, T0004: 1, S0438: 1, L0372: 1, L0773: 1, L0767: 1, L0806: 1, L0542: 1, L0809: 1, L0519: 1, L0529: 1, H0691: 1, S0148: 1, H0660: 1, S0004: 1, S0146: 1, L0780: 1, S0194: 1 and S0276: 1.
HVVAS27	HVVAS27RPO0B	2082	3 - 413	4257		
HVVAW26	HVVAW26R	2083	1 - 324	4258	Lys-62 to Tyr-73.	
HVVB091	HVVB091RPO0B	2084	2 - 436	4259		
HVVBF09	HVVBF09R	2085	3 - 236	4260	Leu-36 to Ser-43, Gly-68 to Phe-73.	
HVVBF66	HVVBF66R	2086	7 - 171	4261	Lys-17 to Tyr-22.	H0672: 2, S0007: 1, L0717: 1, H0545: 1, L0764: 1, L0649: 1, L0659: 1, L0809: 1, L0438: 1, H0555: 1, L0748: 1, L0754: 1 and L0752: 1.
HVVBH88	HVVBH88R	2087	1 - 189	4262		L0659: 14, L0740: 11, H0052: 8, L0662: 8, L0666: 8, H0059: 7, H0265: 6, H0040: 6.

L0596: 6, S0356: 5, S0358: 5, H0539: 5, L0751: 5, L0750: 5, H0431: 4, L0759: 4, H0442: 3, H0575: 3, H0051: 3, T0010: 3, H0428: 3, H0031: 3, H0135: 3, H0433: 3, H0412: 3, H0509: 3, L0637: 3, L0372: 3, L0521: 3, L0806: 3, L0519: 3, L0663: 3, L0664: 3, L0665: 3, S0378: 3, L0591: 3, L0593: 3, H0483: 2, S0360: 2, H0587: 2, H0013: 2, H0036: 2, S0010: 2, S0049: 2, H0194: 2, T0110: 2, H0046: 2, H0123: 2, H0024: 2, H0083: 2, H0179: 2, T0006: 2, H0038: 2, H0538: 2, S0002: 2, L0769: 2, L0796: 2, L0646: 2, L0374: 2, L0648: 2, L0776: 2, H0520: 2, H0519: 2, H0689: 2, H0555: 2, S0028: 2, L0439: 2, L0752: 2,
--

L0755: 2, L0366: 2, H0542: 2, H0556: 1, S0040: 1, S0114: 1, T0049: 1, S0212: 1, H0638: 1, H0125: 1, S0420: 1, S0354: 1, S0376: 1, H0675: 1, H0489: 1, S0468: 1, S0132: 1, S0005: 1, H0492: 1, T0109: 1, S0346: 1, H0505: 1, H0318: 1, H0581: 1, H0196: 1, H0309: 1, H0263: 1, H0545: 1, H0050: 1, L0471: 1, H0012: 1, H0620: 1, H0014: 1, S0051: 1, H0510: 1, H0266: 1, H0188: 1, S0214: 1, H0252: 1, H0039: 1, H0622: 1, H0424: 1, H0030: 1, H0553: 1, H0644: 1, H0316: 1, S0036: 1, H0634: 1, H0087: 1, H0551: 1, L0564: 1, T0041: 1, T0042: 1, L0475: 1, H0130: 1, S0144: 1, S0142: 1, S0344: 1, S0210: 1, L0638: 1,
--

							L0761: 1, L0803: 1, L0653: 1, L0661: 1, L0527: 1, L0636: 1, L0783: 1, L0809: 1, T0068: 1, L0438: 1, S0126: 1, H0690: 1, H0682: 1, H0435: 1, H0658: 1, H0670: 1, H0660: 1, H0672: 1, H0651: 1, S0380: 1, H0522: 1, S0044: 1, H0478: 1, H0479: 1, S0027: 1, L0742: 1, L0748: 1, L0747: 1, L0756: 1, L0757: 1, L0758: 1, H0444: 1, H0445: 1, L0597: 1, L0581: 1, L0603: 1, S0011: 1, S0194: 1, S0196: 1, S0042: 1, L0697: 1 and H0506: 1.			

HVVBO65	HVVBO65R	2092	3 - 644	4267	Pro-62 to Pro-73, Thr-80 to Ser-92, Gln-108 to Tyr-116.			
HVVBO88	HVVBO88R	2093	50 - 433	4268				
HVVBR70	HVVBR70RP 00B	2094	2 - 406	4269				
HVVBT33	HVVBT33R	2095	116 - 316	4270	Asn-15 to Leu-27, Lys-48 to Val-53.			
HVVBT60	HVVBT60R	2096	454 - 2	4271				
HVVBY87	HVVBY87R	2097	3 - 161	4272				
HVVCB04	HVVCB04R	2098	2 - 580	4273	Pro-1 to Phe-9, Ser-111 to Asn-117, Ser-159 to Pro-167.			
HVVCB08	HVVCB08R	2099	1 - 792	4274	Ser-56 to Tyr-62, Gln-67 to Pro-74, Thr-83 to Gly-94, Gln-120 to Gln-130, Pro-150 to Ser-157.			
HVVCC06	HVVCC06R	2100	299 - 427	4275				
HVVCD65	HVVCD65R	2101	224 - 481	4276				
HVVCD81	HVVCD81R	2102	2 - 640	4277				
HVVCD87	HVVCD87R	2103	447 - 695	4278				
						L0439: 23, L0438: 20, H0556: 10, L0665: 10, S0358: 9, L0731: 8, H0423: 8, H0069: 7, H0622: 7, L0666: 7, L0748: 7, L0747: 7, H0486: 6, H0090: 6, L0664: 6, H0519: 6,		

H0539: 6, L0749: 6, L0596: 6, S0222: 5, H0457: 5, H0435: 5, L0756: 5, L0758: 5, L0601: 5, H0013: 4, H0046: 4, H0150: 4, H0266: 4, H0038: 4, L0771: 4, L0662: 4, L0659: 4, L0663: 4, H0670: 4, H0672: 4, H0521: 4, S0404: 4, L0745: 4, H0265: 3, S0114: 3, H0650: 3, H0662: 3, S0360: 3, S0045: 3, H0333: 3, H0156: 3, H0318: 3, H0050: 3, H0620: 3, T0010: 3, H0375: 3, H0428: 3, H0039: 3, H0591: 3, H0040: 3, H0063: 3, H0412: 3, H0100: 3, H0529: 3, L0770: 3, L0775: 3, L0809: 3, H0547: 3, S0126: 3, H0436: 3, L0741: 3, L0752: 3, S0026: 3, H0624: 2, H0713: 2, H0583: 2, S0116: 2, H0663: 2, H0305: 2, H0638: 2,							
--	--	--	--	--	--	--	--

	S0418: 2, S0442: 2, H0580: 2, S0007: 2, H0619: 2, L0717: 2, H0261: 2, H0392: 2, H0586: 2, H0587: 2, H0635: 2, H0271: 2, H0687: 2, H0553: 2, L0456: 2, H0616: 2, H0413: 2, H0560: 2, L0764: 2, L0773: 2, L0521: 2, L0774: 2, L0378: 2, L0806: 2, L0493: 2, L0517: 2, L0647: 2, H0690: 2, H0659: 2, H0658: 2, L0740: 2, L0757: 2, L0588: 2, H0542: 2, H0422: 2, L0600: 2, H0171: 1, S0218: 1, H0657: 1, H0656: 1, H0341: 1, S0298: 1, S0212: 1, S0110: 1, S0001: 1, S0030: 1, H0661: 1, S0420: 1, S0356: 1, S0376: 1, S0444: 1, S0046: 1, S0476: 1, H0550: 1, H0441: 1, H0438: 1, H0492: 1, H0485: 1, H0427: 1, S0280: 1,
--	--

S0010: 1, S0665: 1, H0581: 1, S0049: 1, H0052: 1, H0251: 1, H0309: 1, H0263: 1, H0597: 1, H0041: 1, H0563: 1, H0081: 1, H0012: 1, H0023: 1, H0051: 1, S0051: 1, H0356: 1, H0267: 1, H0179: 1, S0250: 1, H0252: 1, H0615: 1, T0023: 1, T0006: 1, H0031: 1, H0644: 1, L0055: 1, H0673: 1, S0364: 1, L0455: 1, H0068: 1, H0400: 1, S0036: 1, H0087: 1, H0551: 1, H0102: 1, T0041: 1, H0625: 1, H0641: 1, S0344: 1, S0002: 1, S0426: 1, L0369: 1, L0769: 1, L5575: 1, L0772: 1, L0373: 1, L0372: 1, L0363: 1, L0767: 1, L0649: 1, L0560: 1, L0650: 1, L0375: 1, L0661: 1, L0807: 1, L0384: 1, L0519: 1, L0792: 1, S0428: 1,							
--	--	--	--	--	--	--	--

HVVC690	HVVCD90R	2104	47 - 754	4279			H0144: 1, L0352: 1, H0520: 1, H0682: 1, H0660: 1, H0651: 1, H0710: 1, H0518: 1, S0152: 1, H0579: 1, H0696: 1, S0146: 1, H0576: 1, H0631: 1, S3012: 1, S0037: 1, S0028: 1, L0751: 1, L0754: 1, L0779: 1, L0777: 1, L0780: 1, L0753: 1, L0759: 1, S0031: 1, H0445: 1, L0687: 1, L0599: 1, L0608: 1, L0595: 1, H0136: 1, S0242: 1, S0194: 1, S0276: 1, H0543: 1, S0424: 1 and S0452: 1.
HVVC63	HVVC63R	2105	338 - 778	4280			
HVVC65	HVVC65R	2106	2 - 214	4281			
HVVCF38	HVVCf38R	2107	3 - 497	4282			
HVVCg29	HVVCg29R	2108	1 - 441	4283			H0135: 2, S0046: 1, S0222: 1, H0052: 1, H0672: 1, S0328: 1 and H0214: 1.
HVVCg31	HVVCg31R	2109	2 - 415	4284			
HVVCg46	HVVCg46R	2110	3 - 350	4285	Gly-16 to Lys-22, Trp-82 to Lys-87.		

HVVC93	HVVC93R	2111	1 - 405	4286	Arg-48 to Asn-57, Lys-77 to Glu-83, Phe-106 to Asp-112, 27, AR061: 14, AR055: 13	AR089: 107, AR096: 52, AR104: 30, AR060: 27, AR061: 14, AR055: 13		
HVCH28	HVCH28R	2112	3 - 350	4287	Glu-81 to Gly-91, Arg-107 to Asn-116.			
HVCI28	HVCI28R	2113	3 - 119	4288	Asp-10 to Lys-15, Lys-29 to Asp-34.			
HVCI50	HVCI50R	2114	44 - 460	4289				
HVCI85	HVCI85R	2115	3 - 647	4290	Asp-1 to Thr-14, Ala-76 to Thr-88, Asp-101 to Lys-115, Ala-128 to Gln-136, Pro-141 to Gln-151.			
HVCI51	HVCI51R	2116	1 - 351	4291		H0585: 4, H0457: 4, L0809: 4, L0747: 4, S0442: 3, H0492: 3, H0427: 3, H0318: 3, L0666: 3, H0690: 3, H0686: 2, H0662: 2, S0358: 2, S0408: 2, H0150: 2, H0135: 2, H0063: 2, H0494: 2, L0761: 2, L0764: 2, L0773: 2, L0662: 2, L0378: 2, L0665: 2, H0670: 2, S0406: 2, L0744: 2, L0749: 2, L0601: 2, H0170: 1,		

H0685: 1, H0661: 1, H0402: 1, S0348: 1, S0354: 1, S0376: 1, S0360: 1, S0278: 1, H0586: 1, H0333: 1, H0642: 1, L0622: 1, S0280: 1, H0599: 1, H0253: 1, H0231: 1, H0545: 1, H0373: 1, H0266: 1, H0553: 1, S0036: 1, H0551: 1, H0116: 1, H0264: 1, H0059: 1, S0352: 1, S0440: 1, H0646: 1, L0640: 1, L0639: 1, L0630: 1, L0772: 1, L0373: 1, L0646: 1, L0800: 1, L0641: 1, L0374: 1, L0644: 1, L0645: 1, L0794: 1, L0766: 1, L0774: 1, L0775: 1, L0659: 1, L0793: 1, L0532: 1, L0664: 1, H0520: 1, H0672: 1, S0380: 1, H0696: 1, H0478: 1, H0345: 1, L0439: 1, L0750: 1, L0759: 1, H0343: 1, H0595: 1 and H0422: 1.

HVVK59	HVVK59R	2117	1 - 147	4292		L0751: 3, L0757: 3, L0662: 2, H0686: 1, H0266: 1, L0055: 1, L0763: 1, L0764: 1, L0768: 1, L0805: 1, L0653: 1, L0666: 1, H0690: 1, H0672: 1, L0777: 1, L0758: 1 and S0276: 1.		
HVVK78	HVVK78R	2118	3 - 320	4293				
HVVK52	HVVK52R	2119	1 - 339	4294	Pro-11 to Lys-31, Ser-36 to Gln-44, Thr-53 to Gly-58, Ala-74 to Arg-87, Pro-105 to His-113.			
HVVK73	HVVK73R	2120	2 - 775	4295	Gly-8 to Lys-22, Phe-29 to Trp-34, Val-95 to Cys-100, Thr-147 to Gln-161, Gln-164 to Lys-170, Glu-179 to Leu-185, Pro-194 to Gly-199.			
HVVK67	HVVK67R	2121	3 - 293	4296	Trp-36 to Thr-43, Gly-51 to Thr-70, Tyr-87 to Glu-97.			
HVVK84	HVVK84R	2122	3 - 347	4297				
HVVK20	HVVK20R	2123	35 - 466	4298				
HVVK29	HVVK29R	2124	96 - 332	4299		H0521: 182, H0522: 34, S0002: 30, S0278: 27, H0638: 23, S0344:		

13, S0144: 11, S0142: 9, H0580: 8, L0740: 6, L0747: 6, H0445: 6, H0090: 5, L0756: 5, L0777: 5, S0360: 4, H0591: 4, S0426: 4, L0771: 4, L0766: 4, L0776: 4, L0754: 4, S0194: 4, H0341: 3, S0376: 3, H0393: 3, H0575: 3, H0538: 3, H0144: 3, H0716: 2, S0212: 2, H0637: 2, H0331: 2, H0632: 2, H0486: 2, H0590: 2, H0046: 2, H0051: 2, S0440: 2, H0509: 2, L0783: 2, L0663: 2, H0555: 2, L0748: 2, L0439: 2, L0745: 2, L0758: 2, L0362: 2, H0170: 1, H0685: 1, T0049: 1, H0177: 1, S0442: 1, S0408: 1, S0132: 1, S0476: 1, S0300: 1, S6022: 1, H0392: 1, H0537: 1, H0438: 1, H0587: 1, H0497: 1, H0270: 1, T0060: 1, H0013: 1,

	H0427: 1, L0021: 1, H0581: 1, H0374: 1, H0597: 1, H0544: 1, H0546: 1, H0569: 1, H0123: 1, L0471: 1, H0012: 1, S0388: 1, H0275: 1, H0375: 1, H0286: 1, S0003: 1, L0194: 1, T0006: 1, H0644: 1, H0032: 1, H0674: 1, H0361: 1, S0036: 1, H0038: 1, H0040: 1, H0551: 1, H0413: 1, L0475: 1, H0561: 1, S0438: 1, H0131: 1, H0641: 1, L0369: 1, L0762: 1, L0637: 1, L0800: 1, L0662: 1, L0649: 1, L0388: 1, L0774: 1, L0775: 1, L0651: 1, L0653: 1, L0809: 1, L0789: 1, L0666: 1, L0665: 1, S0374: 1, S0126: 1, H0435: 1, H0659: 1, H0672: 1, S0378: 1, H0518: 1, S0392: 1, S3014: 1, L0751: 1, L0779: 1, L0780: 1, L0731: 1,
--	--

HVVCN54	HVVCN54R	2125	2 - 460	4300			L0759: 1, S0260: 1, L0599: 1, S0026: 1, H0423: 1, S0412: 1 and H0506: 1.	
HVVCN66	HVVCN66R	2126	3 - 212	4301				
HVVC013	HVVC013R	2127	2 - 352	4302		Gln-61 to Pro-68, Gln-103 to Ala-108, Tyr-111 to Thr-117.		
HVVC016	HVVC016R	2128	170 - 334	4303		Val-28 to Ser-33.		
HVVC087	HVVC087R	2129	3 - 404	4304		Lys-54 to Ala-67, Arg-77 to Thr-86.		
HVVC041	HVVC041R	2130	2 - 442	4305				
HVVC088	HVVC088R	2131	3 - 449	4306		Ala-35 to Ala-41, Pro-46 to Gly-54, Pro-67 to Gly-87.		
HVVCQ05	HVVCQ05R	2132	11 - 184	4307		Ser-23 to Lys-30.		
HVVCQ49	HVVCQ49R	2133	3 - 605	4308		Glu-74 to Arg-79, Glu-117 to Arg-134.		
HVVCQ70	HVVCQ70R	2134	10 - 144	4309		Arg-30 to Phe-36.	H0672: 2 and L0518: 1.	
HVVCQ93	HVVCQ93R	2135	1 - 630	4310				
HVVC528	HVVC528R	2136	105 - 335	4311				
HVVC532	HVVC532R	2137	35 - 217	4312		Arg-11 to Pro-17, Ser-33 to Lys-46.		
HVVC154	HVVC154R	2138	237 - 698	4313		His-1 to Asn-8, Arg-10 to Gly-16, Tyr-50 to Gly-56.	L0659: 55, H0644: 23, L0748: 18, L0666: 17, L0747: 17, H0622: 16, S0194: 16, H0553: 15.	

L0662: 15, S0126: 15, L0740: 15, L0754: 14, H0031: 13, H0593: 12, L0649: 11, H0435: 11, L0757: 11, H0124: 10, S0250: 9, S0356: 8, H0672: 7, L0362: 7, L0779: 6, S0210: 5, L0771: 5, L0663: 5, L0664: 5, H0547: 5, L0750: 5, L0601: 5, S0360: 4, H0619: 4, L0764: 4, L0804: 4, L0775: 4, S0358: 3, H0486: 3, H0628: 3, H0264: 3, L0451: 3, L0776: 3, L0655: 3, L0783: 3, H0693: 3, H0660: 3, S0454: 3, L0749: 3, L0605: 3, S0192: 3, H0170: 2, H0294: 2, S0180: 2, H0586: 2, H0013: 2, H0687: 2, H0428: 2, L0483: 2, H0488: 2, S0450: 2, H0647: 2, S0208: 2, L0648: 2, L0523: 2, L0809: 2, L0665: 2, H0144: 2, L0565: 2, H0690: 2,
--

H0518: 2, H0696: 2, S3012: 2, L0752: 2, L0755: 2, L0731: 2, H0665: 2, H0171: 1, H0656: 1, S0212: 1, S0376: 1, S0410: 1, S0132: 1, H0393: 1, L0717: 1, H0392: 1, H0331: 1, H0485: 1, T0040: 1, T0060: 1, L0021: 1, H0599: 1, T0082: 1, H0618: 1, H0052: 1, H0085: 1, T0110: 1, H0046: 1, H0050: 1, L0471: 1, H0355: 1, S0003: 1, H0615: 1, H0039: 1, L0143: 1, H0111: 1, L0455: 1, S0366: 1, H0135: 1, H0040: 1, H0551: 1, H0100: 1, L0564: 1, H0509: 1, H0517: 1, L0763: 1, L0769: 1, L0772: 1, L0646: 1, L0768: 1, L0375: 1, L0784: 1, L0806: 1, L0805: 1, L0653: 1, L0654: 1, L0517: 1, L0384: 1, L0383: 1, L0647: 1,
--

HVVCT62	HVVCT62R	2139	340 - 522	4314			L0789: 1, L0791: 1, L0438: 1, H0520: 1, H0689: 1, H0682: 1, H0684: 1, S0152: 1, H0704: 1, H0555: 1, S0432: 1, S3014: 1, S0027: 1, S0028: 1, L0744: 1, L0758: 1, H0595: 1, H0707: 1, S0436: 1, L0591: 1, L0599: 1, S0196: 1, H0422: 1, S0384: 1 and L0600: 1.	
HVVCU14	HVVCU14R	2140	365 - 529	4315	Ile-1 to Ser-6, Lys-13 to His-25.		L0748: 18, L0794: 7, L0438: 7, L0777: 7, L0809: 6, L0439: 6, L0756: 6, L0750: 5, L0717: 3, L0770: 3, L0776: 3, L0664: 3, L0747: 3, L0757: 3, S0222: 2, H0013: 2, H0596: 2, H0040: 2, L0769: 2, L0768: 2, L0766: 2, H0672: 2, L0731: 2, L0758: 2, L0591: 2, L0599: 2, H0624: 1, S0342: 1, H0638: 1, S0376: 1, H0549: 1, H0587: 1,	

HVVCU50	HVVCU50R	2141	23 - 307	4316	Gln-8 to Lys-13, Glu-32 to Arg-56, Ser-60 to Thr-69.	H0574: 1, H0635: 1, S0049: 1, H0052: 1, T0010: 1, H0288: 1, H0286: 1, H0553: 1, L0455: 1, L0351: 1, H0538: 1, L0763: 1, L0638: 1, L0775: 1, L0659: 1, L0783: 1, L0789: 1, L0663: 1, L0665: 1, H0690: 1, S0152: 1, L0740: 1, L0753: 1 and S0424: 1. L0747: 16, L0750: 15, L0752: 15, L0769: 9, L0757: 9, L0005: 8, L0775: 8, L0740: 8, L0774: 6, L0471: 5, H0087: 5, L0758: 5, H0656: 4, L0772: 4, L0731: 4, L0588: 4, H0657: 3, H0341: 3, H0638: 3, S0007: 3, S0046: 3, H0599: 3, S0049: 3, H0009: 3, H0412: 3, L0776: 3, L0783: 3, S0374: 3, H0660: 3, H0672: 3, L0749: 3, L0755: 3, H0352: 3, S0222: 2, H0441: 2, H0251: 2,		
---------	----------	------	----------	------	--	--	--	--

H0309: 2, H0620: 2, H0266: 2, T0067: 2, H0494: 2, L0761: 2, L0651: 2, L0518: 2, S0126: 2, H0670: 2, S0328: 2, H0521: 2, S3012: 2, S0206: 2, L0745: 2, L0753: 2, L0759: 2, L0596: 2, L0608: 2, H0423: 2, H0395: 1, T0002: 1, H0685: 1, S0218: 1, S0116: 1, S0110: 1, H0484: 1, H0661: 1, H0663: 1, H0306: 1, H0402: 1, S0356: 1, S0442: 1, S0358: 1, S0360: 1, H0208: 1, S0045: 1, H0393: 1, H0351: 1, H0392: 1, H0333: 1, H0574: 1, L0623: 1, T0039: 1, T0040: 1, L0586: 1, H0250: 1, H0156: 1, H0575: 1, S0346: 1, H0318: 1, H0581: 1, H0421: 1, H0597: 1, H0546: 1, H0545: 1, H0046: 1, H0041: 1, H0081: 1, H0012: 1,
--

H0023: 1, S0388: 1, H0275: 1, H0356: 1, S0023: 1, H0594: 1, H0188: 1, H0428: 1, H0535: 1, H0674: 1, S0036: 1, H0135: 1, H0063: 1, H0413: 1, H0056: 1, T0004: 1, H0100: 1, T0042: 1, H0334: 1, H0641: 1, H0647: 1, S0144: 1, S0344: 1, L0763: 1, L0371: 1, L0637: 1, L0764: 1, L0768: 1, L0364: 1, L0376: 1, L0524: 1, L0632: 1, L0655: 1, L0659: 1, L0782: 1, L0809: 1, L0666: 1, L0663: 1, H0144: 1, L0565: 1, H0691: 1, H0547: 1, H0593: 1, H0690: 1, H0684: 1, H0579: 1, S0044: 1, H0631: 1, S0028: 1, L0742: 1, L0748: 1, L0746: 1, S0031: 1, S0434: 1, H0667: 1, S0192: 1, S0276: 1, H0542: 1, H0422: 1, H0506: 1 and					
---	--	--	--	--	--

HVVCV41	HVVCV41R	2142	2 - 310	4317	Glu-1 to Gln-10, Val-74 to Arg-83.	L0600: 1.		
HVVCV68	HVVCV68R	2143	2 - 244	4318	Pro-12 to Ser-18, Pro-25 to Pro-30, Ala-62 to Ser-70.			
HVVCW75	HVVCW75R	2144	3 - 410	4319	Met-22 to Asp-27, Cys-43 to Trp-50, Asp-79 to Trp-93, Glu-124 to Glu-136.	L0794: 5, H0617: 4, H0486: 3, L0800: 3, L0764: 3, H0672: 3, L0751: 3, S0360: 2, H0188: 2, S0022: 2, L0769: 2, L0803: 2, L0809: 2, L0663: 2, L0361: 2, H0556: 1, H0583: 1, H0657: 1, S0418: 1, L0005: 1, S0354: 1, S0408: 1, S0045: 1, S0046: 1, S6014: 1, H0587: 1, H0333: 1, H0559: 1, H0596: 1, H0673: 1, H0616: 1, H0494: 1, L0761: 1, L0662: 1, L0651: 1, L0659: 1, L0382: 1, L5622: 1, L0663: 1, H0690: 1, H0670: 1, S0152: 1, S0390: 1, L0747: 1, L0777: 1, L0731: 1, L0758: 1, S0436: 1,		

HVVCX17	HVVCX17R	2145	124 - 297	4320	Asp-1 to Pro-10.	L0592: 1, L0601: 1 and S0424: 1. H0052: 15, H0585: 12, L0740: 12, L0439: 11, L0758: 10, L0754: 9, L5286: 8, L0748: 8, H0141: 7, L0666: 7, H0521: 7, L0742: 7, L0749: 7, H0556: 6, S0222: 6, H0494: 6, L0743: 6, L0751: 6, L0757: 6, H0253: 5, T0010: 5, L0803: 5, L0731: 5, H0657: 4, S0360: 4, S0408: 4, S0046: 4, S0278: 4, H0618: 4, S0049: 4, H0617: 4, H0623: 4, S0038: 4, L0764: 4, L0766: 4, L0805: 4, L0809: 4, L0744: 4, L0746: 4, S0040: 3, S0212: 3, L0005: 3, H0441: 3, H0333: 3, H0013: 3, H0599: 3, H0009: 3, H0242: 3, H0644: 3, H0038: 3, H0551: 3, H0412: 3, T0042: 3, L0769: 3, L0804: 3, L0774: 3,		
---------	----------	------	-----------	------	------------------	--	--	--

L0776: 3, L0792: 3, L0663: 3, L0438: 3, S0044: 3, S0406: 3, S0028: 3, L0745: 3, L0779: 3, L0752: 3, L0362: 3, S6024: 2, H0733: 2, S0132: 2, H0261: 2, H0455: 2, H0438: 2, H0497: 2, H0041: 2, L0471: 2, H0620: 2, H0024: 2, H0051: 2, H0266: 2, H0284: 2, S0250: 2, T0006: 2, S0366: 2, S0036: 2, H0591: 2, S0344: 2, L0369: 2, L5623: 2, L0791: 2, L0665: 2, S0374: 2, H0520: 2, S0126: 2, H0672: 2, H0436: 2, L0741: 2, L0747: 2, L0750: 2, L0756: 2, L0759: 2, S0436: 2, L0591: 2, L0592: 2, L0485: 2, L0608: 2, L0593: 2, L0595: 2, H0667: 2, H0423: 2, L0718: 2, H0149: 1, H0265: 1, H0139: 1, H0716: 1, S0114: 1,
--

T0049: 1, S0218: 1, H0341: 1, S0001: 1, H0484: 1, H0483: 1, H0254: 1, H0255: 1, H0662: 1, H0306: 1, H0638: 1, S0418: 1, S0420: 1, S0356: 1, S0442: 1, S0358: 1, S0444: 1, H0637: 1, S0007: 1, S0045: 1, S0476: 1, H0619: 1, H0393: 1, S6026: 1, L0717: 1, H0370: 1, H0586: 1, H0587: 1, H0574: 1, T0040: 1, H0069: 1, S0280: 1, H0036: 1, S0010: 1, H0390: 1, H0318: 1, H0581: 1, H0234: 1, T0103: 1, H0546: 1, H0545: 1, H0046: 1, N0006: 1, H0569: 1, H0081: 1, H0050: 1, H0047: 1, N0008: 1, S0388: 1, H0107: 1, H0083: 1, H0375: 1, H0188: 1, H0428: 1, H0039: 1, H0424: 1, H0213: 1, L0142: 1, H0181: 1, H0606: 1,
--

HVVCX46	HVVCX46R	2146	35 -418	4321	Arg-9 to Ile-31, Gln-38 to Lys-43, Gln-87 to Ala-92,	H0674: 1, H0135: 1, H0040: 1, H0616: 1, H0087: 1, H0264: 1, H0488: 1, H0268: 1, H0059: 1, H0100: 1, L0351: 1, H0334: 1, H0633: 1, S0142: 1, H0538: 1, S0426: 1, L0640: 1, L0637: 1, L5575: 1, L0800: 1, L0648: 1, L0794: 1, L0655: 1, L0657: 1, L0659: 1, L0542: 1, L0783: 1, L0382: 1, L5622: 1, H0144: 1, H0723: 1, H0519: 1, H0690: 1, H0435: 1, S0330: 1, H0539: 1, S0454: 1, S0404: 1, H0555: 1, S3014: 1, L0780: 1, L0755: 1, H0445: 1, H0595: 1, S0434: 1, L0588: 1, L0605: 1, L0366: 1, H0136: 1, H0542: 1, H0543: 1, H0422: 1, H0506: 1 and H0008: 1.		
---------	----------	------	---------	------	--	--	--	--

HVVCY29	HVVCY29R	2147	2 - 775	4322	Ser-116 to Pro-128. Ser-8 to Ser-14, Asn-68 to Tyr-74, His-80 to Val-91, Glu-141 to Phe-147, Ala-159 to Ser-170, Asp-184 to Gly-199.
HVVCY55	HVVCY55R	2148	2 - 697	4323	Pro-60 to Gly-72, Gln-89 to Ser-94, Pro-121 to Pro-132, Pro-146 to Pro-166.
HVVCY60	HVVCY60R	2149	1 - 588	4324	Lys-30 to Glu-36, Lys-55 to Tyr-68, Ile-82 to Asp-87, Tyr-115 to Ser-125, Pro-139 to Pro-146.
HVVCY62	HVVCY62R	2150	3 - 620	4325	Ala-17 to Lys-23, Leu-25 to Ala-35, Glu-71 to Ala-76, Tyr-79 to His-85, Pro-112 to Gly-120, Gly-149 to Tyr-165, Lys-175 to His-181.
HVVCY75	HVVCY75R	2151	139 - 276	4326	
HVVCY77	HVVCY77R	2152	2 - 598	4327	Glu-179 to Ala-184.
HVVCZ18	HVVCZ18R	2153	423 - 542	4328	
HVVCZ50	HVVCZ50R	2154	139 - 291	4329	
					H0412: 26, S0360: 11, S0126: 8, H0014: 7, H0628: 6, H0413: 6.

S0212: 5, S0045: 5, H0411: 5, H0486: 4, S0003: 4, S0210: 4, H0672: 4, L0731: 4, S0192: 4, S0418: 3, S0046: 3, H0169: 3, L0649: 3, S0040: 2, H0671: 2, H0662: 2, S0358: 2, S0376: 2, S0132: 2, H0635: 2, H0098: 2, H0544: 2, H0546: 2, H0545: 2, H0242: 2, H0015: 2, S0250: 2, H0551: 2, H0268: 2, H0494: 2, L0659: 2, L0517: 2, L0809: 2, H0689: 2, S0028: 2, H0506: 2, H0170: 1, H0171: 1, H0295: 1, H0661: 1, H0639: 1, H0574: 1, H0599: 1, L0022: 1, H0108: 1, H0042: 1, H0004: 1, H0044: 1, H0355: 1, H0510: 1, H0266: 1, S0318: 1, S0316: 1, S0022: 1, H0328: 1, H0039: 1, H0622: 1, H0634: 1, H0488: 1, H0623: 1,
--

HVVDC09	HVVD09R	2155	161 - 313	4330	L0564: 1, H0509: 1, L0764: 1, L0662: 1, L0653: 1, H0144: 1, S0374: 1, L0565: 1, H0670: 1, S0380: 1, H0518: 1, H0555: 1, L0748: 1, L0740: 1, L0751: 1, L0754: 1, L0749: 1, L0777: 1, L0362: 1 and S0196: 1. L0777: 17, L0439: 13, L0731: 9, H0521: 8, S0003: 5, H0547: 5, L0759: 5, L0803: 4, L0748: 4, L0750: 4, L0752: 4, L0351: 3, H0560: 3, L0751: 3, L0749: 3, L0757: 3, H0543: 3, S0134: 2, L0415: 2, S0116: 2, S0358: 2, S0376: 2, H0318: 2, H0581: 2, H0421: 2, H0328: 2, H0090: 2, L0646: 2, L0662: 2, L0768: 2, L0766: 2, S0328: 2, H0215: 2, S0406: 2, L0744: 2, L0608: 2, S0192: 2, H0170: 1, H0171: 1, H0556: 1.
---------	---------	------	-----------	------	---

H0222: 1, H0713: 1, L0420: 1, H0661: 1, H0663: 1, S0360: 1, S0410: 1, H0580: 1, S0007: 1, H0619: 1, H0351: 1, S6022: 1, H0587: 1, H0013: 1, H0427: 1, H0097: 1, H0052: 1, T0110: 1, H0231: 1, L0471: 1, H0266: 1, H0687: 1, S0250: 1, S0214: 1, H0428: 1, T0023: 1, H0628: 1, H0551: 1, H0412: 1, H0494: 1, H0366: 1, S0352: 1, S0440: 1, H0633: 1, H0646: 1, H0538: 1, S0422: 1, S0426: 1, L0369: 1, L0500: 1, L0770: 1, L0637: 1, L0642: 1, L0764: 1, L0381: 1, L0774: 1, L0775: 1, L0375: 1, L0806: 1, L0805: 1, L0654: 1, L0659: 1, L0783: 1, L0666: 1, L0664: 1, L0665: 1, S0374: 1, S0148: 1, H0520: 1, H0519: 1,
--

							H0593: 1, S0126: 1, H0660: 1, H0648: 1, H0672: 1, S0330: 1, H0539: 1, S0152: 1, S0037: 1, L0747: 1, L0605: 1, S0011: 1, H0423: 1, H0422: 1 and H0506: 1.			
HVVDH44	HVVDH44R	2156	2 - 580	4331						
HVVDM23	HVVDM23R	2157	3 - 545	4332						
HVVDM31	HVVDM31R	2158	3 - 446	4333						
HVVDM45	HVVDM45R	2159	1 - 390	4334			L0742: 10, H0144: 6, H0265: 5, S0116: 4, S0046: 4, S0222: 4, H0556: 3, H0250: 3, H0052: 3, S0027: 3, L0595: 3, S0212: 2, H0306: 2, S0358: 2, H0013: 2, H0618: 2, H0124: 2, H0100: 2, S0053: 2, H0660: 2, S0330: 2, S3012: 2, L0748: 2, L0439: 2, L0745: 2, L0757: 2, H0445: 2, S0342: 1, H0484: 1, H0638: 1, S0007: 1, H0393: 1, H0437: 1, H0549: 1, H0438: 1, H0486: 1, H0253: 1, H0390: 1,			

									H0544: 1, H0046: 1, H0009: 1, H0023: 1, N0007: 1, T0010: 1, H0188: 1, H0687: 1, S0003: 1, H0030: 1, S0364: 1, L0455: 1, S0366: 1, H0090: 1, H0038: 1, H0551: 1, H0412: 1, H0059: 1, S0038: 1, H0130: 1, H0641: 1, S0142: 1, S0002: 1, H0517: 1, L0643: 1, L0771: 1, L0794: 1, L0766: 1, L0775: 1, L0654: 1, L0655: 1, L0352: 1, S0008: 1, H0435: 1, H0659: 1, H0658: 1, H0672: 1, H0521: 1, H0522: 1, S0044: 1, H0576: 1, L0779: 1, L0605: 1, L0593: 1, S0026: 1, H0667: 1, S0276: 1, S0196: 1, H0542: 1, H0423: 1 and H0506: 1.					
HVVD53	HVVD53R	2160	2 - 241	4335										
HVVD83	HVVD83R	2161	204 - 524	4336					L0766: 9, L0665: 7, L0659: 6, L0761: 5, L0662: 4, L0776: 4,					

S0418: 3, S0007: 3, H0559: 3, H0457: 3, H0617: 3, L0800: 3, L0751: 3, L0750: 3, H0309: 2, L0769: 2, L0667: 2, L0794: 2, L0664: 2, L0756: 2, L0779: 2, L0777: 2, L0758: 2, H0543: 2, H0556: 1, S0402: 1, S0114: 1, H0650: 1, H0656: 1, S0116: 1, H0484: 1, H0254: 1, H0255: 1, S0420: 1, S0354: 1, S0358: 1, H0676: 1, L0717: 1, S0222: 1, H0614: 1, L0622: 1, H0486: 1, H0069: 1, H0253: 1, H0581: 1, H0024: 1, H0051: 1, H0100: 1, H0494: 1, H0625: 1, H0561: 1, S0144: 1, L0374: 1, L0771: 1, L0773: 1, L0768: 1, L0387: 1, L0774: 1, L0653: 1, L0657: 1, L0384: 1, L0789: 1, L0790: 1, L0792: 1, H0684: 1, H0659: 1,						
--	--	--	--	--	--	--

							H0670: 1, H0672: 1, H0521: 1, S0027: 1, L0741: 1, L0754: 1, L0749: 1, L0780: 1, H0422: 1 and H0352: 1.			
HVVDN29	HVVDN29R	2162	2 - 685	4337	Asp-50 to Gly-55.					
HVVDN77	HVVDN77R	2163	1 - 594	4338	Lys-24 to Glu-34,					
HVVDP70	HVVDP70R	2164	40 - 354	4339	Pro-47 to Arg-56, Tyr-77 to Pro-90.					
HVVDQ46	HVVDQ46R	2165	106 - 423	4340	Lys-12 to Thr-18, Glu-20 to Lys-26, Lys-83 to Lys-90.		H0551: 9, L0662: 9, L0471: 8, L0754: 7, L0766: 6, L0666: 6, S0358: 5, L0663: 5, L0750: 5, L0779: 5, S0007: 4, H0373: 4, L0770: 4, L0803: 4, L0777: 4, L0752: 4, L0757: 4, L0758: 4, S0114: 3, S0212: 3, H0673: 3, H0412: 3, L0769: 3, L0805: 3, L0776: 3, L0809: 3, S0126: 3, L0740: 3, H0506: 3, H0657: 2, S0116: 2, S0356: 2, S0360: 2, H0411: 2, H0390: 2, H0318: 2, S0214: 2, H0644: 2, H0617: 2, H0494: 2,			

L0761: 2, L0773: 2, L0649: 2, L0774: 2, L0653: 2, L0529: 2, H0435: 2, L0749: 2, L0731: 2, L0588: 2, L0608: 2, S0026: 2, H0543: 2, H0294: 1, H0650: 1, H0341: 1, S0354: 1, S0376: 1, H0580: 1, H0339: 1, H0208: 1, S0132: 1, H0640: 1, H0369: 1, H0438: 1, H0574: 1, H0486: 1, H0101: 1, H0427: 1, H0097: 1, H0575: 1, H0037: 1, H0230: 1, H0052: 1, L0040: 1, H0544: 1, H0545: 1, H0086: 1, H0009: 1, S0024: 1, H0510: 1, S0250: 1, H0428: 1, H0166: 1, H0102: 1, H0560: 1, S0294: 1, H0509: 1, S0150: 1, H0633: 1, H0647: 1, L0631: 1, L0646: 1, L0764: 1, L0804: 1, L0806: 1, L0606: 1, L0657: 1, L0659: 1, L0636: 1,						
--	--	--	--	--	--	--

HVVDQ49	HVVDQ49R	2166	2 - 103	434I	L0783: 1, L0382: 1, L0789: 1, L0664: 1, L0665: 1, H0593: 1, H0690: 1, H0682: 1, H0684: 1, H0648: 1, H0672: 1, H0539: 1, H0521: 1, H0555: 1, H0478: 1, L0609: 1, L0744: 1, L0748: 1, L0747: 1, L0755: 1, H0445: 1, H0343: 1, L0581: 1, H0653: 1 and H0352: 1.		
					H0521: 7, H0052: 6, H0622: 5, L0646: 5, H0617: 4, L0662: 4, L0659: 4, H0556: 3, H0341: 3, H0484: 3, S0358: 3, H0580: 3, H0551: 3, L0369: 3, L0657: 3, L0664: 3, H0670: 3, S0328: 3, H0445: 3, L0603: 3, H0583: 2, S0212: 2, S0376: 2, S0007: 2, S0045: 2, S0046: 2, S0132: 2, H0438: 2, H0586: 2, H0486: 2, H0618: 2, S0474: 2, S0049: 2, H0545: 2,		

	H0268: 2, H0494: 2, H0509: 2, H0647: 2, L5565: 2, L0645: 2, L0764: 2, L0666: 2, L0665: 2, H0520: 2, H0689: 2, H0658: 2, S0152: 2, S0406: 2, S3014: 2, L0439: 2, L0751: 2, L0754: 2, L0750: 2, L0758: 2, S0434: 2, L0596: 2, L0581: 2, L0595: 2, L0601: 2, S6024: 1, H0294: 1, H0657: 1, H0656: 1, L0415: 1, H0669: 1, H0671: 1, S0356: 1, S0354: 1, S0360: 1, S0410: 1, H0340: 1, S0476: 1, S0278: 1, H0549: 1, H0550: 1, H0370: 1, H0587: 1, H0497: 1, H0643: 1, H0257: 1, H0318: 1, H0457: 1, H0041: 1, H0123: 1, H0024: 1, H0071: 1, H0375: 1, H0290: 1, H0292: 1, H0428: 1, L0142: 1, S0036: 1, H0063: 1, H0087: 1,
--	--

					H0264: 1, H0059: 1, H0100: 1, S0448: 1, S0450: 1, S0440: 1, H0646: 1, S0144: 1, S0002: 1, L0762: 1, L0640: 1, L0639: 1, L0637: 1, L0372: 1, L0643: 1, L0771: 1, L0773: 1, L0648: 1, L0386: 1, L0774: 1, L0775: 1, L0375: 1, L0376: 1, L0378: 1, L0806: 1, L0653: 1, L0776: 1, L0782: 1, L0383: 1, L0791: 1, H0693: 1, H0547: 1, H0519: 1, H0435: 1, H0660: 1, H0672: 1, S0330: 1, H0696: 1, H0134: 1, H0478: 1, S0028: 1, L0743: 1, L0745: 1, L0747: 1, L0749: 1, L0731: 1, S0436: 1, L0593: 1, H0667: 1, H0543: 1, H0423: 1 and H0352: 1.	
HVVD512	HVVDS12R	2167	1 - 732	4342	AR104: 17, AR089: 10, AR096: 10, AR061: 8, AR060: 4, AR055:	
HVVD521	HVVDS21R	2168	2 - 730	4343		

HVVD55	HVVD53R	2169	2 - 640	4344	4	S0412: 22, L0662: 19, L0777: 14, S0010: 11, S0222: 9, S6028: 9, L0750: 9, T0010: 8, L0659: 8, L0747: 8, L0756: 8, L0663: 7, L0439: 7, H0051: 6, L0518: 6, L0754: 6, L0752: 6, S0280: 5, H0575: 5, S0358: 4, S0346: 4, L0753: 4, H0170: 3, H0662: 3, S0360: 3, H0427: 3, L0471: 3, H0373: 3, L0638: 3, L0637: 3, L0764: 3, L0774: 3, L0809: 3, L0666: 3, S0310: 3, H0672: 3, H0696: 3, L0731: 3, H0506: 3, H0713: 2, S0408: 2, H0411: 2, H0455: 2, H0574: 2, S0414: 2, H0486: 2, H0036: 2, S0049: 2, H0052: 2, H0327: 2, H0687: 2, H0428: 2, H0553: 2, H0644: 2, H0038: 2, L0520: 2,		
--------	---------	------	---------	------	---	--	--	--

L0762: 2, L0770: 2, L0653: 2, L0517: 2, S0044: 2, L0442: 1, H0583: 1, L0443: 1, S0110: 1, S0282: 1, S0400: 1, H0661: 1, S0348: 1, S0356: 1, S0444: 1, H0329: 1, S0007: 1, H0619: 1, S6026: 1, S0300: 1, L0717: 1, S6022: 1, H0550: 1, H0592: 1, H0587: 1, H0599: 1, H0042: 1, H0590: 1, H0318: 1, H0309: 1, H0545: 1, H0563: 1, H0564: 1, H0123: 1, H0019: 1, S0050: 1, L0163: 1, S0388: 1, H0356: 1, H0328: 1, H0688: 1, H0039: 1, T0023: 1, H0031: 1, H0111: 1, H0169: 1, S0364: 1, L0455: 1, H0135: 1, H0163: 1, T0067: 1, T0069: 1, T0004: 1, H0100: 1, S0112: 1, L0370: 1, L0598: 1, L0769: 1, L0630: 1, L0800: 1,						
--	--	--	--	--	--	--

HVV/DJ25	HVV/DJ25R	2170	231 - 353	4345	Thr-35 to Asn-41.	L0648: 1, L0363: 1, L0768: 1, L0649: 1, L0803: 1, L0775: 1, L0375: 1, L0651: 1, L0784: 1, L0523: 1, L0805: 1, L0776: 1, L0527: 1, L0657: 1, L0635: 1, L0783: 1, L0789: 1, L0532: 1, L0664: 1, H0691: 1, T0068: 1, S0148: 1, H0693: 1, H0520: 1, H0593: 1, H0689: 1, H0684: 1, S0330: 1, S0380: 1, S0174: 1, H0555: 1, L0612: 1, L0743: 1, L0748: 1, L0751: 1, L0749: 1, L0779: 1, L0759: 1, L0689: 1, S0434: 1, L0604: 1, L0366: 1, S0106: 1 and S0021: 1.
----------	-----------	------	-----------	------	-------------------	---

HVVDT29	HVVDT29R	2171	109 - 471	4346	Glu-11 to Arg-17, Arg-66 to Pro-79, Ser-104 to Gln-112, Ser-116 to Ser-125.	L0748: 11, L0758: 10, L0747: 8, L0439: 7, H0144: 6, L0805: 5, L0662: 4, H0341: 3, H0052: 3, L0794: 3, L0803: 3, L0809: 3, H0672: 3, L0741: 3, L0752: 3, H0619: 2, S0222: 2, H0013: 2, H0014: 2, H0266: 2, H0553: 2, L0455: 2, H0591: 2, L0770: 2, L0646: 2, L0764: 2, L0666: 2, L0665: 2, H0547: 2, S0126: 2, L0596: 2, L0589: 2, L0605: 2, H0543: 2, H0423: 2, H0624: 1, H0556: 1, H0686: 1, S0040: 1, H0717: 1, H0671: 1, S0476: 1, L0717: 1, H0411: 1, H0586: 1, H0333: 1, H0574: 1, L0021: 1, H0575: 1, H0618: 1, S0010: 1, H0318: 1, H0544: 1, H0009: 1, H0050: 1, L0471: 1, L0163: 1, S6028: 1,
HVVDT44	HVVDT44R	2172	2 - 460	4347		

HVVU49	HVVU49R	2173	328 - 600	4348	Asn-1 to Leu-6.	H0672: 2 and S6028: 1. H0422: 1.
--------	---------	------	-----------	------	-----------------	-------------------------------------

HVVDW02	HVVDW02R	2174	3 - 266	4349	Ser-1 to Pro-9.				
HVVDW61	HVVDW61R	2175	2 - 502	4350					
HVVDX40	HVVDX40R	2176	294 - 455	4351					
HVVDX90	HVVDX90R	2177	14 - 511	4352					
HWHD07	HWHD07R	2178	2 - 391	4353					
HWLAC51	HWLAC51R	2179	11 - 178	4354					
HWLJR51	HWLJR51R	2180	167 - 343	4355		L0766: 3, H0651: 2, H0686: 1, H0656: 1, S0358: 1, L0773: 1, L0775: 1, L0657: 1, L0809: 1, L0792: 1 and L0731: 1.			
HWLME48	HWLME48R	2181	3 - 197	4356	Lys-1 to Asp-8, Lys-41 to Gln-50.	S0152: 7, L0601: 4, H0013: 3, H0551: 3, H0264: 3, H0521: 3, S0046: 2, H0050: 2, H0266: 2, S0022: 2, H0031: 2, H0644: 2, H0494: 2, H0519: 2, H0556: 1, S0040: 1, T0049: 1, S0001: 1, S0356: 1, S0354: 1, S0376: 1, S0045: 1, S0132: 1, H0549: 1,			

									H0550: 1, H0486: 1, T0039: 1, T0040: 1, S0280: 1, H0042: 1, H0575: 1, T0082: 1, H0421: 1, L0471: 1, H0373: 1, H0051: 1, H0355: 1, H0615: 1, H0622: 1, L0483: 1, S0364: 1, H0591: 1, H0268: 1, H0561: 1, S0210: 1, L0364: 1, L0649: 1, L0538: 1, L0659: 1, S0428: 1, H0144: 1, L0602: 1, S0390: 1, S0028: 1, L0758: 1, S0434: 1, L0485: 1 and H0543: 1.	

[0040] The first column in Table 1 provides a unique "Clone ID NO:Z" for a cDNA clone related to each contig sequence disclosed in Table 1. This clone ID references the cDNA clone which contains at least the 5' most sequence of the assembled contig, and at least a portion of SEQ ID NO:X was determined by directly sequencing the referenced clone. The reference clone may have more sequence than described in the sequence listing or the clone may have less. In the vast majority of cases, however, the clone is believed to encode a full-length polypeptide. In the case where a clone is not full-length, a full-length cDNA can be obtained by methods known in the art and/or as described elsewhere herein.

[0041] The second column in Table 1 provides a unique "Contig ID" identification for each contig sequence. The third column provides the "SEQ ID NO:X" identifier for each of the ovarian associated contig polynucleotide sequences disclosed in Table 1. The fourth column, "ORF (From-To)", provides the location (i.e., nucleotide position numbers) within the polynucleotide sequence "SEQ ID NO:X" that delineate the preferred open reading frame (ORF) shown in the sequence listing and referenced in Table 1, column 5, as SEQ ID NO:Y. Where the nucleotide position number "To" is lower than the nucleotide position number "From", the preferred ORF is the reverse complement of the referenced polynucleotide sequence.

[0042] The fifth column in Table 1 provides the corresponding SEQ ID NO:Y for the polypeptide sequence encoded by the preferred ORF delineated in column 4. In one embodiment, the invention provides an amino acid sequence comprising, or alternatively consisting of, a polypeptide encoded by the portion of SEQ ID NO:X delineated by "ORF (From-To)". Also provided are polynucleotides encoding such amino acid sequences and the complementary strand thereto.

[0043] Column 6 in Table 1 lists residues comprising epitopes contained in the polypeptides encoded by the preferred ORF (SEQ ID NO:Y), as predicted using the algorithm of Jameson and Wolf, (1988) *Comp. Appl. Biosci.* 4:181-186. The Jameson-Wolf antigenic analysis was performed using the computer program PROTEAN (Version 3.11 for the Power MacIntosh, DNASTAR, Inc., 1228 South Park Street Madison, WI). In specific embodiments, polypeptides of the invention comprise, or alternatively consist of, at least one, two, three, four, five or more of the predicted epitopes as described in Table 1. It

will be appreciated that depending on the analytical criteria used to predict antigenic determinants, the exact address of the determinant may vary slightly.

[0044] Column 7 in Table 1 provides an expression profile and library code: count for each of the contig sequences (SEQ ID NO:X) disclosed in Table 1, which can routinely be combined with the information provided in Table 4 and used to determine the normal or diseased tissues, cells, and/or cell line libraries which predominantly express the polynucleotides of the invention. The first number in column 7 (preceding the colon), represents the tissue/cell source identifier code corresponding to the code and description provided in Table 4. For those identifier codes in which the first two letters are not "AR", the second number in column 7 (following the colon) represents the number of times a sequence corresponding to the reference polynucleotide sequence was identified in the tissue/cell source. Those tissue/cell source identifier codes in which the first two letters are "AR" designate information generated using DNA array technology. Utilizing this technology, cDNAs were amplified by PCR and then transferred, in duplicate, onto the array. Gene expression was assayed through hybridization of first strand cDNA probes to the DNA array. cDNA probes were generated from total RNA extracted from a variety of different tissues and cell lines. Probe synthesis was performed in the presence of ^{33}P dCTP, using oligo(dT) to prime reverse transcription. After hybridization, high stringency washing conditions were employed to remove non-specific hybrids from the array. The remaining signal, emanating from each gene target, was measured using a Phosphorimager. Gene expression was reported as Phosphor Stimulating Luminescence (PSL) which reflects the level of phosphor signal generated from the probe hybridized to each of the gene targets represented on the array. A local background signal subtraction was performed before the total signal generated from each array was used to normalize gene expression between the different hybridizations. The value presented after "[array code]:" represents the mean of the duplicate values, following background subtraction and probe normalization. One of skill in the art could routinely use this information to identify normal and/or diseased tissue(s) which show a predominant expression pattern of the corresponding polynucleotide of the invention or to identify polynucleotides which show predominant and/or specific tissue and/or cell expression. The sequences disclosed herein have been determined to be

predominantly expressed in ovarian tissues, including normal and diseased ovarian tissues (See Table 1, column 7 and Table 4).

[0045] Column 8 in Table 1 provides a chromosomal map location for certain polynucleotides of the invention. Chromosomal location was determined by finding exact matches to EST and cDNA sequences contained in the NCBI (National Center for Biotechnology Information) UniGene database. Each sequence in the UniGene database is assigned to a "cluster"; all of the ESTs, cDNAs, and STSs in a cluster are believed to be derived from a single gene. Chromosomal mapping data is often available for one or more sequence(s) in a UniGene cluster; this data (if consistent) is then applied to the cluster as a whole. Thus, it is possible to infer the chromosomal location of a new polynucleotide sequence by determining its identity with a mapped UniGene cluster.

[0046] A modified version of the computer program BLASTN (Altschul et al., J. Mol. Biol. 215:403-410 (1990), and Gish et al., Nat. Genet. 3:266-272 (1993)) was used to search the UniGene database for EST or cDNA sequences that contain exact or near-exact matches to a polynucleotide sequence of the invention (the 'Query'). A sequence from the UniGene database (the 'Subject') was said to be an exact match if it contained a segment of 50 nucleotides in length such that 48 of those nucleotides were in the same order as found in the Query sequence. If all of the matches that met this criteria were in the same UniGene cluster, and mapping data was available for this cluster, it is indicated in Table 1 under the heading "Cytologic Band". Where a cluster had been further localized to a distinct cytologic band, that band is disclosed; where no banding information was available, but the gene had been localized to a single chromosome, the chromosome is disclosed.

[0047] Once a presumptive chromosomal location was determined for a polynucleotide of the invention, an associated disease locus was identified by comparison with a database of diseases which have been experimentally associated with genetic loci. The database used was the Morbid Map, derived from OMIM™ (*supra*). If the putative chromosomal location of a polynucleotide of the invention (Query sequence) was associated with a disease in the Morbid Map database, an OMIM reference identification number was noted in column 9, Table 1, labeled "OMIM Disease Reference(s)". Table 5 is a key to the OMIM reference identification numbers (column 1), and provides a description of the associated disease in Column 2.

TABLE 2

Clone ID NO.-Z	Contig ID:	SEQ ID NO:	Analysis Method	PFam/NR Description	PFam/NR Accession Number	Score/Percent Identity	NT From	NT To
HOVCD34	396327	11	blastx.2	(AK000844) unnamed protein product [Homo sapiens]	dbj BAA91396.1	58%	319	167
HEBGDS8	498281	12	blastx.2	eggshell protein - fluke (Schistosoma haematobium) (subclone 1)	pir A44805 A44805	74%	3	98
HETCD42	535532	13	blastx.2	actin capping protein alpha subunit [Homo sapiens]	gb AA88848.1	100%	90	947
HTXKC18	535854	14	blastx.2	(AK000496) unnamed protein product [Homo sapiens]	dbj BAA91205.1	62%	873	676
HLDK20	553765	15	blastx.2	complement factor B [Homo sapiens]	emb CAA51389.1	91%	150	1283
H2MBD33	558474	16	blastx.2	NBR2 PROTEIN (NEXT TO BRCA1 GENE 2 PROTEIN).	sp O15453 NBR2_HUMAN	100%	138	290
HSYBX61	558708	17	blastx.2	N-cadherin [Homo sapiens]	gb AA03236.1	98%	3	515
HELHC03	562745	18	blastx.2	(AF118082) PRO1902 [Homo sapiens]	gb AAAF72026.1 AF118094_21	67% 81%	1063 1154	905 1089
HOIMP70	585385	19	blastx.2	precursor polypeptide	emb CAA33261.1	75%	120	347

HSKNZ25	585675	20	blastx.2	(AA -21 to 782) [Homo sapiens] unknown protein	gb AA88038.1	63%	522	686
HIDPFK39	588869	21	blastx.2	[Homo sapiens] leukocyte adhesion glycoprotein precursor [Homo sapiens]	gb AAA59491.1	99% 90%	79 681	687 746
HL1AB07	638220	22	blastx.2	(AF151884) CGI-126 protein [Homo sapiens]	gb AAD34121.1 AF151884.1	100% 91%	2 463	466 498
HHGAS83	654868	23	blastx.2	(AF044671) MM46 [Homo sapiens]	gb AAD02337.1	100%	133	393
HTSGU37	704405	24	blastx.2	(AF019406) collagen type IX alpha 2 chain [Homo sapiens]	gb AAC33512.1	100% 50% 51% 40% 51% 52% 53% 47% 54% 46% 52% 47% 48% 38% 48% 50% 46% 37% 49%	117 192 189 12 192 195 192 156 189 156 195 195 192 15 192 195 195 192 15 195 195 15 195	434 434 431 434 431 431 431 431 431 431 431 431 431 431 431 434 434 431 431 431

48%	195	431
50%	201	431
37%	24	431
48%	189	431
48%	189	431
44%	180	431
46%	195	434
43%	192	425
40%	195	461
43%	195	434
48%	195	413
34%	45	395
44%	192	365
36%	195	431
47%	192	347
47%	395	502
59%	395	490
44%	383	481
52%	401	472
46%	401	481
38%	383	481
43%	395	481
40%	383	481
38%	383	481
33%	380	502
47%	422	487
61%	419	457
29%	331	432
52%	430	218
37%	249	133

H2LAN34	705692	25	blastx.2	unnamed protein product [unidentified]			emb CAB42187.1	38% 50% 32%	240 471 501	100 418 421
HPMBZ40	711500	26	blastx.2	fusion protein: ubiquitin (bases 43_513); ribosomal protein S27a (bases 217_532) [Rattus norvegicus]			emb CAA57432.1	64%	14	199
HLYPE52	732342	27	blastx.2	tyrosine kinase activator protein 1 (TKA-1) [Homo sapiens]			emb CAA90511.1	87%	402	563
HTTEC47	745343	28	blastx.2	unknown protein [Homo sapiens]			gb AAA88038.1	95% 92% 51% 35% 32% 38%	101 585 149 619 1008 775	580 1007 547 1008 1008 846
HOEMO90	746416	29	blastx.2	(AF046001) zinc finger transcription factor [Homo sapiens]			gb AAC78561.1	73% 77% 63%	696 229 902	232 20 627
HCHND34	762806	30	blastx.2	cytochrome oxidase subunit III [Phoca vitulina]			emb CAA45263.1	89% 70%	122 348	367 440
								81% 86%	12 500	497 778

HAMGI86	78328	31	blastx.2	unnamed protein product [unidentified]	emb CAB42212.1	91% 94%	424 611	609 667
HLWCN67	794213	32	blastx.2	(AK014485) putative [Mus musculus]	dbj BAB29387.1	80%	386	631
HOFAC09	806819	33	blastx.2	acidic ribosomal phosphoprotein (P0) [Homo sapiens]	gb AAA36470.1	87% 52%	42 5	812 55
HRDEL61	824886	34	blastx.2	X-linked retinopathy protein [C-terminal, clone XEH.8c] [human, Peptide Partial, 100 aa] [Homo sapiens]	gb AAB26149.1	67% 45%	808 644	632 576
HDPOR60	828176	35	blastx.2	(AF151799) CGI-40 protein [Homo sapiens]	gb AAD34036.1 AF151799.1	96% 82%	8 8	1867 1867
HPRTS71	828574	36	blastx.2	rTsbeta [Homo sapiens]	emb CAA61761.1	100%	45	458
HOHB190	828862	37	blastx.2	tyrosine kinase receptor [Homo sapiens]	gb AAA61243.1	90% 63% 34% 53%	193 159 281 268 396 375	417 281 396 419 879
HOHAL47	828872	38	blastx.2	pericentriol material 1 [Homo sapiens]	gb AAA60120.1	88%	328	879
HYASE58	829298	39	blastx.2	O-6-methylguanine-DNA methyltransferase [Homo sapiens]	gb AAA59594.1	99%	74	694
HKAAH95	829958	40	blastx.2	ribosomal protein L22	emb CAA55204.1	70%	41	418

HTTIQ02	829981	41	blastx.2	[Rattus norvegicus] activating transcription factor 3 [Homo sapiens]	gb/AAA20506.1]	96%	44	391
HIWACG9 1	830195	42	blastx.2	heat shock protein 90, hsp90 [rats, brain, Peptide, 724 aa] [Rattus sp.]	gb/AAB23369.1]	82% 93% 37% 76%	119 88 60 573	610 132 170 611
HUFBX52	830497	43	blastx.2	tenascin X [Homo sapiens]	gb/AAB47488.1]AAB 47488	99% 100% 29% 26% 30% 27% 29% 28% 25% 27% 28% 28% 27% 28% 27% 28% 24% 24% 32% 29% 24% 30% 32%	2 1525 20 20 20 17 20 17 20 8 2 14 20 20 17 20 365 20 413 11 2 20 17	1525 1785 1255 1114 1033 991 988 934 1096 898 973 856 892 712 712 1150 973 946 907 991 589 589

29%	20	712
27%	20	601
27%	2	856
31%	716	1111
25%	176	1012
30%	176	562
25%	437	1096
29%	92	565
25%	521	1135
23%	437	1045
23%	434	1096
20%	488	1231
25%	860	1141
22%	557	1111
25%	860	1153
24%	557	1309
28%	809	1135
20%	641	1117
27%	437	1021
39%	437	604
36%	1487	1690
27%	557	1096
28%	1487	1684
23%	788	1135
22%	809	1309
30%	1487	1684
33%	638	877
29%	35	331
23%	455	1045
28%	1487	1684

HWLJE49	831453	44	blastx.2	2A9 peptide [Homo sapiens]	gb AAA35886.1	98%	46	315
HLQBT44	832454	45	blastx.2	precursor polypeptide [Homo sapiens]	emb CAA28169.1	100%	175	357
HSLGG58	833088	46	blastx.2	(AF096304) putative sterol reductase SR-1	gb AAD09765.1	92%	143	181
						100%	134	997
						97%	1018	1305
						27%	1487	1684
						30%	622	825
						25%	1487	1684
						37%	1556	1690
						28%	1487	1684
						23%	1487	1690
						27%	316	501
						48%	1110	1190
						30%	962	1150
						64%	1101	1142
						32%	267	404
						26%	52	498
						52%	1607	1663
						32%	1089	1181
						32%	1089	1181
						22%	650	1027
						53%	1398	1436
						60%	1089	1118
						41%	189	257
						29%	118	255
						37%	979	1083
						29%	1024	1146
						35%	361	480
						34%	1050	1175

HCIBQ33	840756	47			[Homo sapiens] (AB005624) rig-analog DNA-binding protein [Sus scrofa]	dbj BAA21510.1	61%	976	1029
HDTMK30	840862	48			cysteine-rich intestinal protein [Homo sapiens]	gb AAB61158.1	100%	123	353
HDPFX64	841088	49			quinone oxidoreductase [Homo sapiens]	gb AA60239.1	100%	404	1096
HODFG71	843485	50			(AF081114) ORF2 [Mus musculus domesticus]	gb AAC72810.1	29% 34% 50% 41% 34%	1121 591 281 1188 860	834 301 198 1102 717
HCE3165	844534	51			kinesin-like motor protein KIF1C [Homo sapiens]	gb AAC52117.1	100%	11	172
HSADVH65	847355	52			plasmolipin [Rattus norvegicus]	emb CAA90017.1	48%	11	382
HBXFT41	847647	53			P26s4 [Chocinae gen. sp.]	gb AAB34132.1	93%	707	805
HBMCM3 8	847821	54			(AF161356) HSPC093 [Homo sapiens]	gb AAF28916.1 AF1 61356_1	55% 71% 59%	406 485 333	266 390 268

HACBO42	849064	55	blastx.2	G-protein coupled receptor, SREB1 - human	pir JC7287 JC7287	63%	534	502
HODBF86	859572	56	blastx.2	(AF123880) gag polypeptide [multiple sclerosis associated retrovirus element]	gb AAD48374.1	57%	3	368
HOABP90	859622	57	blastx.2	(AF089895) cAMP-dependent protein kinase subunit R2 beta [Oryctolagus cuniculus]	gb AAF00037.1	40% 35%	225 542	437 652
HE8UE42	862010	58	blastx.2	(AJ224875) glucosyltransferase [Homo sapiens]	emb CAA12176.1	97%	628	735
HUSJ59	862481	59	blastx.2	(AF070661) HSPC005 [Homo sapiens]	gb AAD20967.1	99%	15	1610
HSSDM07	863515	60	blastx.2	TcD37 homolog [Homo sapiens]	gb AAF04914.1 U67085_1	100%	80	316
HBCBW52	866444	61	blastx.2	(AK000385) unnamed protein product [Homo sapiens]	dbj BAA91131.1	94% 95% 95%	224 647 160	691 1090 225
HOGAS18	867969	62	blastx.2	(AK000496) unnamed protein product [Homo sapiens]	dbj BAA91205.1	69%	1498	1202
HHSDL18	869701	63	blastx.2	(AF118082) PRO1902 [Homo sapiens]	gb AAF22026.1 AF118094_21	79%	508	380
						65% 61% 67%	590 429 317	721 536 427

HLD0G81	874506	65	blastx.2	(AF153191) nm23-H7 [Homo sapiens]	gb AAD34622.1 AF1 53191.1	100%	1232	798
HTXQF81	874608	66	blastx.2	A4 protein [Homo sapiens]	gb AA35499.1	29%	1208	813
HCRNG90	874787	67	blastx.2	5'-nucleotidase [Homo sapiens]	emb CAA39271.1	100%	173	628
HPWCL64	874891	68	blastx.2	SPIN protein [Homo sapiens]	emb CAA39271.1	98%	156	911
HWLMV6 2	874930	69	blastx.2	(AL137608) hypothetical protein [Homo sapiens]	emb CAA75163.1	93%	44	643
H2MAC06	874931	70	blastx.2	neutrophil gelatinase associated lipocalin [Homo sapiens]	emb CAB70840.1	31%	104	397
HWLRF06	875093	71	blastx.2	GCP170 [Homo sapiens]	emb CAA58127.1	100%	170	763
HODDO41	875352	72	blastx.2	(AF064604) KE03 protein [Homo sapiens]	dbj BAA23661.1	60%	23	373
HCHMQ74	875371	73	blastx.2	(AK001527) unnamed protein product [Homo sapiens]	gb AAC17109.1	53%	3	383
HT3AI55	875682	74	blastx.2	(AK000219) unnamed protein product [Homo sapiens]	dbj BAA91741.1	80%	350	454
HMVBD68	876052	75	blastx.2	(AK000219) unnamed protein product [Homo sapiens]	dbj BAA91018.1	97%	3	440
HOCTA74	876487	76	blastx.2	catalase [Campylobacter jejuni] propionyl-CoA carboxylase [Homo sapiens]	emb CAA59444.1	98%	4	504
					emb CAA32763.1	85%	207	103
						100%	65	292

HISET05	876686	77	blastx.2	(AJ270993) homeobox protein [Homo sapiens]	emb[CAB65909.1]	95%	511	849
HCRQM22	876696	78	blastx.2	hepatocyte nuclear factor-3/fork head homolog 11B [Homo sapiens]	gb AAC51129.1	66%	801	926
HILITC92	877310	79	blastx.2	neuronal PAS2 [Homo sapiens]	gb AAB47250.1	84%	3	401
H2CAA49	879484	80	blastx.2	(AF053651) cellular apoptosis susceptibility protein [Homo sapiens]	gb AAC35297.1	97%	197	418
HETKQ94	880545	81	blastx.2	(AL132954) putative protein [Arabidopsis thaliana]	emb[CAB75750.1]	95%	142	201
HOFMO23	882466	82	blastx.2	(AF089745) FK506-binding protein [Homo sapiens]	gb AAC78853.1	32%	482	574
HNTNP58	882787	83	blastx.2	(AF118082) PRO1902 [Homo sapiens]	gb AAF22026.1 AF118094_21	100%	954	2108
HOFNY28	888480	84	blastx.2	AF-1 [Homo sapiens]	gb AAA16955.1	35%	53	838
HESMQ01	889128	85	blastx.2	(AF118082) PRO1902 [Homo sapiens]	gb AAF22026.1 AF118094_21	23%	1556	2080
HIE2RG21	891139	86	blastx.2	peptidylprolyl isomerase [Homo sapiens]	emb[CAA37039.1]	33%	1155	1298
HHENW77	894855	87	blastx.2	vacuolar proton-ATPase subunit M9.2	emb[CAA75571.1]	95%	14	499
						54%	14	499
						46%	14	454
						52%	194	499
						62%	2230	2391
						60%	2382	2480
						63%	18	476
						62%	416	658
						71%	2699	2490
						100%	59	553
						71%	99	338

HOFNU55	897344	88	blastx.2	[Homo sapiens] (AP000616) similar to RING-H2 finger protein RHA1a (AF078683) [Oryza sativa]	dbj BAA85438.1	70%	654	544
HE8TE40	897862	89	blastx.2	Rabin3 [Rattus norvegicus]	gb AAA67890.1	87% 93%	152 1086	1114 1532
HNTCH73	900546	90	blastx.2	bone morphogenetic protein 2B [Homo sapiens]	gb AAA51835.1	100%	195	1418
HHFVY53	902534	91	blastx.2	IDN4-GGTR14 PROTEIN.	sp Q9Y6Y5 Q9Y6Y5	95% 22% 20% 22%	6 837 801 833	128 956 932 940
HDPIE44	904763	92	blastx.2	(AF200706) UNC-84A [Caenorhabditis elegans]	gb AAFI5883.1 AF2 00706_1	47% 39% 25% 42%	1852 170 1375 109	2418 313 1524 171
HHSAX10	904783	93	blastx.2	delta-9 desaturase [Gallus gallus]	emb CAA42997.1	71%	9	680
HP1AX83	906066	94	blastx.2	weakly similar to E. nidulans bimA gene product (SP:PI7885) [Caenorhabditis elegans]	gb AAA81143.1	39% 37% 19% 22% 21%	1167 588 1776 1716 1653	2459 1025 2474 2186 2093
HOFNG28	908746	95	blastx.2	CD59 GLYCOPROTEIN	sp O62680 CD59_P1 G	24% 54%	2274 51	2540 401

					PRECURSOR (MEMBRANE ATTACK COMPLEX 1 (PROTECTIN)).						
HOFOB27	911947	96	blastx.2		(AL050283) hypothetical protein [Homo sapiens] initiation factor 2	emb CAB43384.1	97%	640	1491		
HHBHJ45	913831	97	blastx.2		[Homo sapiens] initiation factor 2	gb AA67038.1	42%	380	745		
HHPDV90	914163	98	blastx.2		[Homo sapiens] initiation factor 2	gb AA67038.1	100%	329	427		
HWMMQ4 7	915068	99	blastx.2		(AF090942) PRO0657 [Homo sapiens] (AB029042) ATPase inhibitor precursor	gb AAF24054.1 AF0 90942_1	53%	1122	874		
HBGNY08	915214	100	blastx.2		(AP000616) similar to RING-H2 finger protein RHA1a (AF078683) [Oryza sativa]	dbj BAA88422.1	100%	53	232		
						dbj BAA85438.1	100%	1614	1754		
							95%	423	364		
							100%	423	367		
							100%	423	367		
							100%	423	367		
							77%	423	343		
							90%	423	364		
							84%	421	347		
							44%	308	222		
							33%	309	229		
							35%	332	249		
HODGH45	917394	101	blastx.2		(AK000385) unnamed protein product [Homo sapiens]	dbj BAA91131.1	80%	819	938		
HWLKE58	917716	102	blastx.2		(AL031629) similar to RNA recognition motif. (aka RRM, RBD, or I 1)	emb CAA20980.2	52%	275	496		

HRADL40	919433	103	blastx.2	dodecenyl-CoA delta-isomerase [Homo sapiens]	emb CAA81066.1	100%	37	942
HOEMP73	919895	104	blastx.2	cathepsin B [Homo sapiens]	gb AAC37547.1	85%	113	1129
HOEMS02	920253	105	blastx.2	ATPase subunit 6 [Phoca vitulina]	emb CAA45262.1	54%	156	386
HUVHD12	921707	106	blastx.2	inositol polyphosphate 4-phosphatase [Rattus norvegicus]	gb AAB01069.1	35% 30% 60%	187 687 43	492 953 102
HMVDQ4 1	922191	107	blastx.2	(AL137496) hypothetical protein [Homo sapiens]	emb CAB70771.1	98% 99%	384 2	809 385
HODGI03	922879	108	blastx.2	replication protein A 14kDa subunit [Homo sapiens]	gb AAA58350.1	100%	447	635
HODHD14	922955	109	blastx.2	unknown protein [Homo sapiens]	gb AAA88036.1	60%	22	174
HODDC03	925296	110	blastx.2	ORF4 [Rattus norvegicus]	emb CAA37647.1	40% 58% 50%	126 344 307	245 433 336
HVCAG04	925735	111	blastx.2	(AF034633) GPR39 [Homo sapiens]	gb AAC26082.1	100% 29%	1281 1364	781 1293
HCKCE02	925837	112	blastx.2	putative p150 [Homo sapiens]	gb AAC51269.1	47% 50% 31% 40%	1 709 329 876	489 867 607 971
HHERA91	926067	113	blastx.2	(AK000530) unnamed protein product [Homo sapiens]	dbj BA91234.1	100%	2031	2399

HAGDL82	928396	114	blastx.2	sapiens] (AK000496) unnamed protein product [Homo sapiens]	dbj BAA91205.1	75% 75%	5 210	208 257
HWBDS34	930484	115	blastx.2	Similar to S.cerevisiae hypothetical protein L3111 (S59316) [Homo sapiens]	dbj BAA13405.1	99%	57	983
H6ESA39	933568	116	blastx.2	BCDNA:LD21720 PROTEIN.	sp Q9XZ25 Q9XZ25	47% 26%	623 14	1150 169
HPCOR06	933678	117	blastx.2	ORF1 [Homo sapiens]	emb CAA36480.1	73% 62% 56% 60%	99 310 28 266	266 459 144 310
HTFNO06	933989	118	blastx.2	(AC009177) unknown protein [Arabidopsis thaliana]	gb AAF27013.1 AC0 09177_3	39%	95	505
HODFY08	935520	119	blastx.2	(AB012223) ORF2 [Canis familiaris]	dbj BAA25253.1	45%	79	447
HRACK27	935717	120	blastx.2	(AL133045) hypothetical protein [Homo sapiens]	emb CAB61372.1	97%	681	1283
HRACW30	940639	121	blastx.2	(AF113887) kappa 1 immunoglobulin light chain [Homo sapiens]	gb AAD29608.1	93%	79	786
HOF0C32	941969	122	blastx.2	placental protein Diff33 [Homo sapiens]	emb CAB09783.1	84%	84	1502
HTTDM15	942511	123	blastx	(AL033127) hypothetical protein	emb CAA21869.1	27% 20%	62 759	427 959

HOVAY63	944031		124	blastx.2	[Schizosaccharomyces pombe] L1 retroposon, a portion of its ORF2 sequence [Rattus norvegicus]	emb CAA43593.1	32%	965	1048
HDPFY41	946502		125	blastx.2	(AL050294) hypothetical protein [Homo sapiens]	emb CAB43393.1	94% 88% 52%	624 1984 2039	2072 2037 2113
HCOPB92	948608		126	blastx.2	ORF2, encodes a reverse transcriptase homolog [Homo sapiens]	gb AAB60345.1	60% 51% 66% 64%	99 2 257 169	182 106 310 243
HB/HO83	948708		127	blastx.2	envelope polyprotein [Mus musculus]	gb AAA37565.1	46% 45% 85%	177 64 2	365 174 61
HWME04 4	948719		128	blastx.2	(AF038963) RNA helicase [Homo sapiens]	gb AAD19826.1	99%	3	1343
HEXJA96	949001		129	blastx.2	IDN4-GGTR14 PROTEIN.	sp Q9Y6Y5 Q9Y6Y5	93%	40	135
HTLGV19	949574		130	blastx.2	human complement C1r [Homo sapiens]	gb AAA51851.1	46% 36% 25%	72 604 567	539 732 740
HMSAC18	950257		131	blastx.2	(AB023584) reduced expression in cancer [Homo sapiens]	dbj BAA88923.1	100%	29	919
HAPRB43	950475		132	blastx.2	(AF124522) tetraspan NET-2 [Homo sapiens]	gb AAD17517.1	100%	3	536